ARCHIVES OF SURGERY.

JANUARY, 1890.

ON EXCEPTIONAL RESULTS FROM VACCINATION.

The facts as to fatal vaccination with sloughing of the arm which I published in the last number of The Archives (p. 97), have brought me several communications as to other cases bearing upon the subject. It will be remembered that one of the principal questions left in doubt was whether these cases of gangrene, or phagedæna, at the seat of vaccination should be attributed to syphilis, and if so, whether to inherited taint in the infant or to the inoculation of syphilitic virus with the vaccine. In two out of the three cases those most concerned in the treatment of the infants firmly believed that the phenomena witnessed were due to syphilis, and in all there were suspicious facts. My own conclusion was that they were certainly not cases of inoculated syphilis, and most probably not in connection with inherited taint. I arrived at the latter belief with, however, much hesitation and doubt. One of the children (vaccinated, be it remembered, from the calf) was believed to have had both eruption and nodes, and another had phagedænic satellite sores. Under the circumstances of doubt as to diagnosis with which I was compelled to conclude my report, the additional facts which I now publish are very valuable. It will be seen that they strongly support the conclusion that these cases are examples of aberrant vaccinia, or of vaccinia in infants of special idiosyncracy, and not of syphilis in any form.

The following is an extract from a letter from Dr. W——, who sends me a pen-and-ink sketch showing a condition of

things not unlike that in Mr. Clement Lucas's case, but on a smaller scale :—

"I vaccinated on October 4th, with lymph taken from a healthy child, who is healthy still, of healthy parents. Lancet purified. Lymph blown from tube on to back of a saucer.

"Child was previously healthy, and so far is healthy still.

"Inspected on eighth day—October 11th. Satisfactory; vesicles beginning to dry up.

"From this date until October 24th I saw nothing more of the child, but on the 24th the mother brought it to me. I found a blackish slough, at the seat of vaccination, an inch and a half across, and a smaller one adjoining its external border about three-eighths of an inch in diameter. No enlarged glands in axilla; child seemed healthy in other respects.

"The history the mother gave me was, that two days after I inspected it, *i.e.* the tenth day, the vaccine marks began to inflame, and the skin from elbow to shoulder became very red, with a clear line of demarcation between healthy and inflamed skin; the child seemed feverish for two or three days, but after that its general health did not seem to suffer in any way. After five or six days the redness went away, and on October 24th—twenty-first day after vaccination —she brought the child to me."

This child subsequently did well.

A very similar communication is made to me by Dr. H——, a public vaccinator and highly-skilled surgeon :—

Oct. 8, 1889.

Dear Mr. Hutchinson,—I have just read your article in The Archives of Surgery on the fatal cases of gangrenous inflammation after vaccination.

In my practice as a public vaccinator I am sorry to say I have had several cases, although I know of only one case, and that did not come under my own observation at the end, where death was believed to have been the direct result of the inflammation.

I am sorry I cannot furnish you with notes. I can state with confidence that several of the cases occurred in infants who were typical specimens of perfect health. In most of the cases the four vesicles became merged into one deep ulceration, which took months to heal up. I found no progress was made in the healing process until the slough had been removed by persistent poulticing. After that was accomplished I applied a strong lead lotion. In no single case

could I discover any history of syphilis either in the affected child or in the vaccinifer.

In one series of cases the lymph had been taken from a child who was vaccinated from calf lymph from the Local Government Board. In these cases there was not the same gangrenous inflammation as in the others, but a persistent formation of scabs. I have a note of one case which was vaccinated on the 5th of January, and it was not till the 3rd of March that matter had ceased discharging.

With regard to the fatal case, a friend of mine who attended the child when it died, said he had no reasonable doubt that the child's health had been so undermined by the long continued purulent condition of the arm, that it succumbed to some trifling attack of bronchitis. I know from my own observation that the child's arm was for three weeks or a month in much the same condition as the arm figured in your article.

Believe me, faithfully yours, ——— ———

Dr. Gregory's Case of Hæmorrhagic Vaccinia.

Dr. Gregory has recorded, in the Medico-Chirurgical Transactions for 1842, a case which is not without its bearing on the subject under consideration. It is an instance of petechial eruption after vaccination. The vaccine spots themselves were hæmorrhagic, and a large swelling occurred on one temple, and there was bleeding from one ear. It will be remembered by those who read my cases attentively, that in one of them, which was considered to be syphilis by those who had the child under observation, there were swellings on the head and discharge from one ear. In the case referred to, the swellings appeared to be inflammatory, whereas in Dr. Gregory's they were hæmorrhagic; and another important difference is that in Dr. Gregory's the phenomena ran their course during the usual stages of vaccination, whereas in mine they were protracted long after it. In spite of these differences, however, I cannot but think the cases of some essential similarity, and that idiosyncracy on the part of the child, and not anything peculiar in the lymph used, was the cause of what was observed. The facts as regards Dr. Gregory's case are as follows:—A healthy girl, aged four, was vaccinated from an eighth-day vesicle, by Mr. Marson, of the Small-pox Hospital. At the same time, her elder brother and a younger sister were also vaccinated, and to them nothing unusual happened. On the fifth day the mother noticed that the arm of the child, the subject of the case,

was more inflamed than those of the others, and that there were some spots on the child's face. On the eighth day the vesicles were dark and as if filled with blood, and the areola was of a mahogany colour. There were now several petechiæ dispersed over the body, particularly over the neck, face, and arms ; there were several patches of ecchymosis on the tibia. On the ninth day "the outer portions of a large areola circle had assumed a yellowish tint, while the inner portions were still of a dark mahogany colour. The vesicles themselves were of a jet black. The petechiæ over the body were numerous. On the left temple there was a very large extravasation of blood, owing to a slight bruise that the child had received. There had been some bleeding from the left ear, and a few drops of blood had escaped from the nostril." In this case the child's health throughout remained good, and the ecchymosed state of the arm and the petechiæ declined with the decline of the vaccination vesicles. On the sixteenth day of vaccination all hæmorrhagic appearances had ceased.

Had the inflammatory process in this case been a little more acute than it was, it is very probable that we should have had an example of gangrene of the arm from vaccination. As it is, we have not only a proof of the power of vaccinia to produce, like variola, a condition of the blood tending to hæmorrhages ; but a good example of a copious vaccinia eruption with local swellings over bones which, had they been less definitely hæmorrhagic, might easily have been mistaken for nodes. Dr. Gregory's narrative of the case, it is needless to say, is exceedingly well done ; he regards it as a typical example of petechial vaccinia, and states that it is the only one which he has ever seen. In the course of some interesting remarks on the power of specific poisons to produce a state of hæmorrhagic diathesis, he makes the plausible suggestion that many cases described as hæmorrhagic purpura, are probably the offspring of such poisons. He alludes to two other cases in which hæmorrhagic symptoms are said to have followed vaccination. Of one of these a wax model is preserved in the museum of Guy's Hospital (No. 2,705), described as the arms of a young man affected with purpura consequent on vaccination.

Keloid in Vaccination Scars. History of very protracted Ulceration of the Vaccination Sores.

In the following case a taint of inherited syphilis had been suspected as the cause of unhealthy vaccination sores, and on that account the patient was sent to me. The evidence, however, although at first sight plausible, was not conclusive, and my own impression is that no taint existed. The mother of the child had, however, obtained a divorce from her husband under the allegation of cruelty in having given her syphilis. The question as regards the child was one of dates. Miss M——, when I saw her in July, 1889, was eight years of age. She was brought to me on account of the unhealthy state of her vaccination scars, and under the impression that their condition was due to syphilis. I found four nodules of keloid of considerable thickness and of the most characteristic appearance. Nothing is less common, so far as my knowledge extends, than for vaccination scars to take on keloid induration. When they do so, it is probably in consequence of their healing having been unduly prolonged. Such was the history in the present instance. The child had been vaccinated from calf lymph, February 15, 1888. The sores, as I was informed, had taken about eight months to heal, and had for long been in a very unhealthy condition. Her mother insisted, in particular, that they had for long smelt very badly. Although they were said to have become of considerable size, they had never been confluent, and the keloid indurations were at a considerable distance from each other. Most unfortunately, as regards personal disfigurement, the vaccination had been done high up on the shoulder. Not very long after the vaccination, gatherings in the ears occurred. I could not find anything in the child's appearance to suggest inherited syphilis. She was florid and well grown, and her teeth and physiognomy showed no peculiarities. It was said that in infancy she had been very feeble, and was not expected to live, and her mother thought that she then had snuffles; but it was not believed that syphilis had ever been diagnosed. Her mother's history was that the marriage took place in October of 1879, and that, after one or more miscarriages, the child who is our patient was born in 1881. Up to the time of

her birth, and for some time afterwards, the mother had suffered nothing; but in 1884, after the birth of a second child, which died at six months old, the mother came out in a general eruption, which was diagnosed as syphilitic, and for which she was long under treatment. Two years after this she was under Mr. Lawson's care for "an affection of the nerve of one eye," which Mr. Lawson recognized as being probably syphilitic. It should be stated that the second child was treated for inherited syphilis in infancy, and it is further to be noted that in it the vaccination places never healed.

The facts which have been above stated seem to point clearly to the conclusion that the father contracted syphilis some time prior to his wife's second confinement in 1884, and communicated it to the latter. On this supposition the patient was born several years before either parent had syphilis, and we have therefore an instance of unhealthy ulcers in connection with vaccination in a patient who was not inheritedly tainted, and for whom the lymph was taken from the calf. I am well aware that these conclusions must be held with some degree of doubt. From the description given of the sores, their acutely inflamed state, &c., my impression is that they only just stopped short of passing into the gangrenous condition described in my former paper, and it is of interest to note that abscesses in the ears occurred, as was the case in one of the patients referred to. In the case referred to, as in the present one, the vaccination was from calf lymph.

ON SOME MIXED FORMS OF ECZEMA (HYBRIDS WITH ERYSIPELAS, URTICARIA, &c.).

(*Continued from page* 133).

Eczema-Erysipelas from the use of Arnica.

The eruption which is in some persons invariably evoked by the local use of arnica, is, I believe, usually a mixed form of eczema and erysipelas. In some instances it partakes more of the character of the one, and in others of the other, the balance being turned by the pre-existing proclivities of the patient. The arnica dermatitis is sometimes very severe, and may spread over a whole limb. It has a definitely marked, advancing edge, just like that of erysipelas, and is attended by much œdema. In the case which I have related, this hybridity appeared to exist. The patient had had a contusion which caused swelling, and for the swelling arnica was used, with the result of an acute attack of erysipelas-eczema.

What we witness in cases of personal idiosyncrasy in reference to arnica, we may make use of to elucidate other cases in which the cause is less evident. In some persons sea-air, or a draught of cold air, or the sun's rays on a hot day, may produce effects precisely parallel to those which follow the irritation of that special drug.

Eczema-Erysipelas-Urticaria.

The disease which I have next to describe is a combination of eczema, erysipelas, and urticaria. It displays sometimes simultaneously, sometimes at different periods, the distinctive phenomena of all these three well-known types of disease. And it displays them, I contend, because the causes of all three are in action at the same time. It is not a case of

mere resemblance, it is one of essential mingling. I have seen a good many examples of the disease referred to, and might be tempted to coin a new name for it if I could think of one which would not be misleading.

I will again recapitulate the essential features of the three type maladies, or rather forms of inflammation, which I have named. *Eczema* is an inflammation of the skin, the liability to which is often inherited, which often occurs in infancy or childhood, which affects by preference certain well-known regions, has a tendency to spread and persist when it has once originated, and is marked by the exudation of a serous secretion from its inflamed surfaces.

Erysipelas has for its peculiarities a tendency to rapid development and spreading, great œdematous swelling of the parts affected, with vesication, an invariably limited duration, and in the case of the face a remarkable proneness to recur.

Of *Urticaria* the principal features are, that it is developed in what are called wheals, which are often produced with extreme rapidity, and may disappear as quickly. These wheals, whilst not unfrequently due to external causes, are remarkably prone to be developed in connection with errors in diet.

We know nothing of any form of erysipelas which is due to articles of food or even to drugs, and only in a very modified sense do we recognize such causes in reference to eczema, whilst they are everyday occurrences as regards urticaria.

I have treated, however, three or four almost exactly similar to the following within the last month (June, 1881). The following are the notes as taken at the time :—

Miss Ethel T—— is a young lady of rather fair complexion, and, in a general way, of good health. Her father and other relatives have been much troubled with eczema. In infancy she had erysipelas, and also eczema. She continued through childhood liable to what she calls attacks of nettlerash and erysipelas, but it was not until about two years ago that her disease assumed its more troublesome form. She then, whilst residing in France, had an attack which did not limit

itself as usual to her face, but spread over the whole body. It is just possible that the spreading was aggravated by the oily applications which were employed. At any rate she had a most severe illness, and was from head to foot affected by a red and weeping condition of the skin. She was a month in bed, and at the end of the time was still far from well. Ultimately, however, her skin perfectly recovered, and for some months remained as sound as ever. Then she had another attack, and, to shorten the story, she counts some eight or ten during the twenty-four months. They have always begun on the face, and have usually caused such swelling of the eyelids as completely concealed her features and closed her eyes. At the same time the hands have usually been covered by little vesicles, which began between the fingers and then spread over the hand generally. On the lower part of the face and neck the eruption has always been attended by little pimply vesicles, which broke and ran water. Desquamation of the epidermis has always followed the attacks. The latter have shown a definite tendency to spontaneous disappearance, and of late, whatever the treatment pursued, she has always been well within a month.

Let me now ask attention to a few facts which help our conjectures as to cause. Miss T—— is a total abstainer as regards stimulants, and has always been so, and, from a dislike to meat, she is almost a vegetarian. An attack which she had last November was, she believes, certainly due to having eaten some sausage. More than once she has believed they were caused by eating strawberries, and twice they followed exposure to cold wind when heated by exercise.

She believes that place of residence has great influence, and has never suffered from the attacks whilst living in London. Her home is in a cold bracing place, and her worse attacks have been whilst staying there, and during the autumn months.

She has evidently a very irritable skin, gnat-bites always inflame very much, and on one occasion a cold bandage applied to the neck brought out an eruption. In childhood she repeatedly had nettlerash from eating porridge.

It is interesting to note that although in former years she

was sure that strawberries induced the attacks, she has been able this year, whilst living in London, to eat them with impunity.

My narrative has, I hope, proved satisfactorily that our patient has had urticaria in connection with its ordinary causes, a recurrent inflammation of the face, not distinguishable from erysipelas, and finally eczema of the face, neck, hands, and body. Lastly, she has become subject to recurring attacks in which the features of all three diseases are mingled.

In explanation of her liabilities I would suggest that she inherits a state of skin liable to eczema, since her father has had that disease; that further, her skin is urticarious, since gnat-bites, nettle-stings, &c., occasion very large wheals; and further, that the occurrence of erysipelas in childhood has stamped a proclivity to mild attacks of that disease. I will not lay much stress on this last fact, for I have seen many cases of this hybrid malady in which there was no history of infantile erysipelas.

Recurring Erythema-Urticaria.

There is a peculiar form of erythematous urticaria which is caused by cold. Its subjects are almost always women. I have known more than one case in which a lady could not expose her face for even the shortest time to a breath of cold air without having it flush and swell. The liability usually lasts for some months. A good example of this malady was presented in the case of a Mrs. L——, in whom it had been quite suddenly developed, during cold weather in the early spring of 1888. It had been present a fortnight when I first saw her, and it affected her face and all her limbs. Her face was flushed and red without any obvious wheals, but on the legs and thighs there were long whitish wheals in the midst of general erythematous congestion. Mrs. L—— had a very furred tongue, and admitted that she had been out of health, and feeling chilly. She had not noticed any dietetic influence on her skin. The attack had begun by flushing of her face, which had extended almost immediately to her hands and arms. Its connection with cold seemed very definite.

Contrary to what is usual in urticaria she said that she was only comfortable when warm in bed, and that the moment she got out in the mornings her skin began to burn and itch. She was also comparatively comfortable when in a very warm room. She had never been in the least liable to nettlerash until the present attack.

A fortnight later Mrs. L—— was quite well of the skin irritation, but had developed a severe pain in the back of neck after a rigor, with herpes on lip. (See March 5, 1888, Day-book.)

Eczema-Urticaria.

I may quote yet another good case of a mixed form of eczema, with an alliance perhaps to urticaria and possibly to erysipelas. At any rate the attacks began acutely and usually with shivering, and they cleared off after a while almost spontaneously.

Another alliance may be traced in the fact that this patient was in early life under the late Mr. Startin for common psoriasis, and that she still shows some slight patches on her elbows and knees.

Miss S—— was aged 40 when she consulted me in May, 1884. She was then suffering from a sharp attack of a lichenoid and erythematous eczema on her neck and arms; it was papular, or indeed almost in urticarious wheals. It was very pruriginous, and showed the effects of scratching by blood crusts and eczematous exudation. Excepting where irritated by scratching it did not weep. It was almost universal, involving the face, ears, scalp, limbs, and trunk. It was worse on the latter parts.

Miss S—— told me that her first attack was in 1877. In 1878 she had rheumatic fever for the second time. She counted four or five definite attacks of this urticarious eczema. One of them had been apparently caused by eating oysters. All had begun with shivering, followed by burning heat, and after all the skin had peeled.

In describing the sago grain condition on her hand, she used the expression that "little bubbles formed under the skin, which dried up and then broke." It appeared that she had usually distinct deposit of lithates during the attacks.

After ten days' treatment by arsenic and alkalies, and a tar wash, Miss S—— was almost well. Her anxiety, however, was rather as to prevention of other attacks, as she alleged they were now recurring very frequently.

Vesicating Erythema.

I could not produce a better example of vesicating erythema, or one which better illustrates its differences from erysipelas, than that of Mrs. ——.

I saw this lady first on May 9, 1888, and she then had two symmetrical groups of vesications over her malar bones. They had been present about a week, and were already beginning to dry. She had a few isolated and abruptly margined patches of erythema on her hands. None of these were larger than sixpences, and none had vesicated. There was a still more scanty crop of still smaller spots on her feet. Mrs. E—— was 26 years of age, and had been married five years. She was thin, but in good health. She had experienced five attacks of the eruption, the first four years ago, and all the others within the last year. The first was the most severe, but affected her face only. It lasted only ten days, and this had been about the duration of them all. They had never occurred in summer, always in winter or spring. One of them had happened whilst residing at Gibraltar.

I asked if the patches had ever begun in the nose and spread from thence to the cheeks, or if they had ever caused the eyelids to swell up, and to both of these questions the reply was "No, never." It will be seen that in these features it differed wholly from recurring erysipelas. Mrs. E—— knew of no cause for it, but was inclined to associate it with cold and damp. The attacks were always attended by constipation. They always ceased spontaneously.

On the association of Eczema-Erysipelas of the face with Chronic Eczema in other parts.

It will be seen that in several of the cases which I have mentioned one of the facts in proof of the mixed nature of the disease was the persistence of eczema on one part of the body,

with liability to recurrent attacks of eczema-erysipelas on others. I have had under care several elderly gentlemen of gouty tendencies in whom this association was a conspicuous feature. Of these the following may serve as an example.

Mr. John T——, a very healthy old gentlemen of 72, has been under my care at times since 1881, his trouble being chronic eczema of the limbs, with liability to recurring attacks of erysipelatous inflammation of his face. His first attack was thirty years ago, when it was diagnosed as acute eczema by the late Dr. Elliotson. Since then he has had innumerable repetitions. He has often had them brought on by exposure to wind, as in grouse shooting. In 1884 I saw him during recovery from a severe attack which had covered his nose and eyelids, and caused the latter to swell up so as to quite close his eyes. Patches of eczema on his limbs were almost constantly present, and he kept by him a prescription of the late Mr. Startin's, which he considered invaluable when his eruption became pruriginous.* Mr. T—— had not himself ever had actual gout, but he considered himself inclined to it, and a brother had suffered much. He alleged that port wine always helped away his attacks of erysipelas-eczema of the face.

I have seen several cases like Mr. T——'s in all respects, excepting that the face in the intervals of the attacks never got quite well. In these the eczematous nature of the disease in the intervals was marked beyond dispute, but the acute attacks were sudden in onset, attended by much œdema, and attended, in fact, by all the conditions of erysipelas. In some of these cases I have attended the relations (children or otherwise) for common eczema.

A Case of Acute Vesicating Erysipelas-Eczema.

I saw with Dr. Hess, on Tuesday, Nov. 12th, an old lady, 64, with most acute vesicating dermatitis of both her arms (eczema-erysipelas). It was her second attack. I had myself treated her for a previous one a year ago, and she had in the interval been perfectly well. The history of this second out-

* The details of Mr. Startin's prescription—for those who may be curious in such matters—was Borax, 3½; Ammonia, 3½; Dilute Hydrocyanic Acid, 3j; Glycerine, 3½; in eight ounces of Rose Water.

break was of interest. The patient suffered from deafness and otorrhœa from her right ear, and probably in connection with this had had several attacks of giddiness. She was suffering from one of these, and was under Dr. Hess's treatment for it when the arms inflamed. The giddiness ceased when the arms began to burn, and it was at first supposed that there was some bond of association between them. The arms began to tingle from a little above the wrists, and both pretty nearly together. I saw them on the fifth day of the eruption. The hands, excepting that they were involved in œdematous swelling, were not affected. The redness began just above the wrists and extended continuously to a little above the elbows. It was of vivid tint, and attended by great swelling and tension. Everywhere, but especially in the lower parts, there were numerous and large clear vesicles like those resulting from a slight scald. I thought at first that some irritating application must have been used inadvertently, but I could not get any support to this suspicion. At the upper edge of the inflamed part the margin was abrupt, but it was that of erythema only, as in erysipelas, but broken up into little spots (lichenoid eczema). The inflammation of the skin was not confined to the arms. There were streaks of redness (lichenoid eczema) on the neck, and others on the fronts of the ankles.

No definite rigor had preceded this severe attack, but Mrs. S—— said she had felt a little chilly and creepy. She had not lost her appetite nor been feverish (Thermometer not used).

I prescribed for this patient—who was, it will be seen, in an acute stage—the tincture of aconite in ten minim doses three times a day, and with it a very liberal application of the lead and spirit lotion to the affected parts. I did not see the lady again, but Dr. Hess, who attended her, was kind enough to inform me that the dermatitis did not spread after my visit. Although we had forbidden wine and put the patient on a rather low diet, a short attack of acute gout in one foot occurred during the convalescence. The skin peeled when the eczematous inflammation subsided. Nothing can be more clear when we note the rapid and complete

subsidence of the dermatitis, than that it was not of the type of common eczema. The latter always shows a tendency to persist. The difference was also well demonstrated by the large size of the bullous vesications which developed. We must not be hasty in assuming because definite gout occurred during the recovery that therefore the dermatitis was gouty. It is very common for gouty persons to have an attack of podagra when laid up by any cause.

NOTES ON THE CANCEROUS PROCESS AND ON NEW GROWTHS IN GENERAL.

The study of the cancerous process and of new growths may be, I cannot but think, much simplified for those who are able to accept, as probably true, a few fundamental propositions. Some of these I will endeavour to state, premising that the clinical evidence is, I think, very strong indeed upon which their probability rests.

1.—The cancerous process is very closely allied to one of chronic inflammation, and is very frequently preceded by changes, often of long persistence, which are not distinguishable from it.

2.—The essential feature in which the cancerous process differs from common inflammation is in that its activity has escaped the control of the organism in which it is manifested. There can be no stage of retrocession, whether under the influence of time or treatment.

3.—The condition of senility, whether of the part concerned alone or of the whole organism, is by very far the most important of those which favour the escape of local cell-growth from the controlling forces of the organism. It is in old persons or in old organs (the breast, for instance) that the cancerous process most usually begins.

4.—The peculiarities which we witness in special forms of the cancerous process are for the most part due to the special tissue in which the change originates.

5.—Next in importance to the influence of senility comes that of inherited peculiarity of tissue, and next to it of some local damage received.*

If these propositions are accepted, it will be seen that all

* An *Imperium in Imperio* is the most concise expression for a cancer, but it is applicable also to any local inflammation so long as it lasts.

search after a parasitic cause for cancer is beside the mark. Micro-organisms may be present, probably they are, and at some stages they may possibly assume peculiarity, but they are never the causes of cancer. The latter can originate in the senile under any of the ordinary causes of local inflammation.

It is very desirable in the study of cancer to separate what is common from what is rare. We must form our opinions by the examination of the evidence which comes to hand on all sides, not by that which is exceptional. In explanation of the latter, the laws of heredity must be called to our aid. In the category of the exceptional I would at once place all instances of cancer occurring in young persons, and am prepared to believe that inheritance is in all such cases at work.

It has been held that the infective property of cancer,—its tendency to travel up lymphatics and to become disseminated by the blood,—is a feature of difference between it and inflammation. I venture, however, to feel very confident that the more we study the various processes of inflammation, the more we shall feel assured that they are one and all in different degrees infective. Some travel by the lymphatic channels, like epithelial cancer and scirrhus (carcinoma); others by the blood-vessels, with tendency to general dissemination, as in the sarcomata. I have elsewhere, and repeatedly, tried to illustrate and enforce this doctrine by reference to traumatic periostitis, lupus, acne, boils, psoriasis, and many other maladies. Indeed, the assertion is definitely that all forms of inflammation are attended by the formation of a plasma which is in greater or less degree infective, and that they all tend to generalization just as cancers do. We have strangely overlooked the facts which favour this belief, and have supposed, perhaps a little thoughtlessly, that these maladies have a sort of potential or predestined completeness from their beginning, rather than that, as in cancer, each stage depends upon its predecessor.

In the narration of the facts and cases which are to follow I shall keep in mind the general creed just avowed, and shall endeavour to direct attention to its illustrations.

On the absence of Gland implication in Rodent Ulcer (Rodent Cancer).

A recent work on general pathology by a distinguished physician contains the following passage in reference to the exemption of the lymphatic glands in rodent cancer: "The lymphatic glands are rarely affected, but this exemption is perhaps due to locality, since other morbid processes affecting the same parts (lupus and ordinary suppuration, as impetigo contagiosa) rarely affect the glands. The lymphatic communications of this part of the skin appear to be scanty." I cannot but think that most of the statements in these sentences involve more or less of error. Lupus is a disease which, whether it occurs on the limbs, trunk, or face, very rarely indeed causes enlargement of the lymphatic glands, and it is more frequently, I think, attended by such enlargement when it occurs on the face than anywhere else. Impetigo contagiosa is a name for a malady about the nature of which we know very little. It is transitory and easily cured, before there has been opportunity for serious gland implication, and it is, as a matter of fact, almost always attended by temporary enlargement of them. As for common suppuration, it may be said that with inflamed hordeolum, or common stye, it is an almost constant observation that a lymphatic gland over the parotid just in front of the ear becomes irritated, and for a time enlarged. I have often in children had to open glandular abscesses near the ear in connection with sores about the eyelid, and sometimes the glands of the neck become implicated also. I do not believe that there is any peculiarity whatever as regards the lymphatic system of the face, which renders this region less liable than other parts to irritation of its lymphatic glands from absorption. It is far more probable that the peculiarity of rodent cancer in this respect depends upon itself. This is proved, I think, by the fact that when malignant ulcers resembling rodent of the face form on other parts of the surface they are, as when on the face, free from any tendency to gland disease. It is to be admitted that this occurrence is a rare event, yet we do witness it occasionally. Again, when the ordinary form of epithelial cancer attacks the face, it pro-

duces gland disease just as quickly as if it were located on other parts. This is especially true of cancer of the lip, but it is illustrated occasionally by cancer of the conjunctiva also. The probability seems to me to be that malignant action beginning in the skin of the face takes in virtue of the tissues in which it originates some peculiarity of growth, which makes it but little liable to affect the lymphatics. What that peculiarity is it is quite impossible to say, but no doubt it has to do with the especial elements in which it originates. I may admit that the fact raises in my own mind a strong suspicion that rodent cancer does not begin in gland tissues. Can we have a more remarkable fact than that if by local irritation of the prolabium malignant action be induced, it will take the form of common epithelial cancer and rapidly affect the glands; whilst if the true skin of the lip be the part first affected, however near to the prolabium it may be, the form of cancer originated will be that of true rodent, which will spread very slowly and will not affect glands. That the difference has nothing to do with the abundance or otherwise of lymphatic channels, we see proved, I think, by the fact that if rodent cancer, having begun on the skin, spreads to the prolabium, it in no wise changes its nature, and the freedom from lymphatic infection remains as before. A stamp of peculiarity is evidently given to the disease from its origin, and this it keeps throughout.

Exceptional conditions preceding Rodent Ulcer in the Face.

I have seen two cases of a peculiar spreading growth on the skin of the face, probably allied to cancer, but not presenting the features of either rodent ulcer or of the crateriform growth. Both of them occurred in ladies between fifty and sixty years of age, and they were exactly alike. In the first, a lady was sent to me from Chester because two medical men had differed in opinion, one thinking that the growth was of little consequence, and the other asserting that it was rodent ulcer. I had in the first instance been consulted by letter, a coloured portrait of the sore having been sent to me. Although I have used the word sore there was no real ulcer,

but simply a little elevated patch about as big as a fourpenny piece. It was well defined but not accurately round, and was placed on the left cheek, just beneath the inner canthus. Its surface looked slightly papillary, and a few thin epidermic scales adhered to it. Its centre was not depressed as is the case in a disc of rodent, nor was there the slightest trace of the roll of glossy induration which characterizes the edge of the latter. It looked more like a patch of sebaceous lupus than rodent, but was not so rough and dry as that affection usually is. It differed from the crateriform growth in not having attained any material thickness, and in not showing any tendency to break down in the centre. I thought that it was more nearly allied to this than anything else, and advised that it should be cut away with scissors and the base touched with the actual cautery. My only reason for not destroying it altogether with the cautery, was my wish to obtain the specimen for microscopic examination. Unfortunately my patient, before returning to her surgeon, who would have carried out my plan, fell into the hands of a specialist friend, who, not knowing the interest that had been felt in her case, insisted upon destroying offhand what he called a rodent ulcer with nitric acid.

My second case was a lady named S——, aged 50, who was sent to me in November, 1888, by Mr. Miller, of Stoke Newington. She had a patch exactly like the one I have just described on the left side of the bridge of her nose. It had been there for some years, and was increasing very slowly. Formerly it was liable to bleed if scratched, but it had given her no trouble, and it was the anxiety of her friends only which led her to take advice. It should be stated that her face had been much scarred by small-pox, which had occurred in early life. I advised that the little patch should be regularly painted with the liquor arsenicalis; but as this did not cure it, Mr. Miller very properly got anxious, and sent her to me again in March. I then found it in much the same condition, not raised more than a couple of lines from the surface, quite free from induration, and presenting none of the characteristic features of rodent as regards the edge, &c. As in the previous case, it was covered with peeling flakes of epidermis, and

when these were removed its surface was seen to be finely granular. As the patient had a great objection to anything in the way of excision, I painted the patch freely with nitric acid. My interest in these two cases, which are examples of an apparently insignificant condition, is chiefly in connection with the fact that they probably afford us a connecting link between chronic inflammation and malignant action. It will be seen that both patients were at the cancerous age. There was nothing in either to distinguish the morbid process from one of chronic inflammation. But the isolation of the patch and its slow tendency to spread were features in which it approached the type of malignancy.

In recording these two cases I may be permitted a remark upon the value of careful descriptions of the very earliest stages of surface new growths, accompanied wherever possible by microscopic examination. I am sorry that in neither of the above was the latter practicable.

Notes on Warts and Papillary Growths.

Every one must have been struck at times to observe the remarkable tendency of warts to disappear of themselves, and that with extreme rapidity. A medical friend vouches to me for the literal truth of the statement that a young girl under his observation had her hands much disfigured by warts and that in the course of *a very few days*, and he believes without special treatment, they wholly disappeared. No recurrence took place. The mother of this girl subsequently died of cancer of the breast.

I was myself in boyhood familiar with the fact that warts would go away, but I do not recollect any instance so definite as the above, and in most cases some kind of treatment was usually being tried. During my professional life all cases of warts which I have been shown have, as a matter of course, been prescribed for. So remarkable have some of the instances of rapid cure been, that I have been in the habit of speaking of "frightening" them away. In one case a young gentleman had his face literally covered with warts. They had been present many months. I touched a few of them with the acid nitrate of mercury; not nearly all, for they

were too many. All, however, straightway vanished. In the course of a few weeks he was absolutely free, and remained so ever after. Several very similar cases have fallen under my observation. A little boy of four was brought to me with his face and hands covered with low papillary growths. I gave his mother some liquor arsenicalis, and told her to touch the warts every morning with a camel's hair pencil dipped in it. It is to be noted that the child had already been under several methods of treatment, but the little growths were so numerous that their true nature had not been recognized, and no external treatment had been adopted. Under the arsenic-touching treatment all the spots had quite vanished in about a fortnight.

The following memoranda respecting warts seem worthy of being kept in mind :—

Warts seldom occur in large crops excepting to young persons.

The foliated wart is almost restricted to the young, or at any rate to those under middle age.

If elderly persons get papillary growths on the skin they are seldom foliated, but usually low, hard, and flat-topped.

Elderly persons are, however, liable to foliated (often pointed) papillary growths on mucous membranes; in the mouth chiefly, but now and then in the anus.

There appears to be some association between the tendency to warts and the liability to cancer. The children of cancerous parents often suffer much from warts.

The hands are the parts most frequently affected by warts, next the face and scalp.

The lower extremities hardly ever grow warts. Excepting in connection with lupus or elephantiasis, I do not know that I ever saw warts on the feet.

Warts are not very common on the genitals, excepting as a sequel of some venereal inflammation (true chancre, soft sore, or gonorrhœa).

Common balanitis seems to have little or no power in evoking warts.

Persons with fat, flabby, cold hands do not easily grow warts, nor are the latter often associated with liability to chilblains.

It is an unquestionable fact that the presence of the poison of syphilis in the blood may cause papillary hypertrophies in the form of common warts. These may be seen in the genitals, but still more conclusively in the middle of the tongue.

In cases of cancer, especially of the breast, I have repeatedly seen the whole trunk covered with low warts.

The typical foliated wart seldom shows any tendency to take on cancerous characters, and the more perfect its development the less may be said to be the risk.

It is highly probable that one wart produces others, and so on by a process of infection.

On Cancerous Ulcers which assume a condition resembling a healthy, florid, granulating surface.

Mrs. Garrett Anderson (M.D.) was kind enough to ask me to see a case under her care at the Women's Hospital which was of great interest. I was told that it was a question of diagnosis between "lupus of the vulva" and epithelial cancer. For my own part I felt no doubt that it was an example of the latter disease, but its features were certainly very peculiar. Its peculiarity consisted in its being surrounded by a wide border of soft granulation structure. It was only in the middle of the patch that there was anything which was in the least hard. At this part there was a disc about the size of a half-penny, which, although like the rest clean and florid, was very firm, and the surface of which presented a minutely granular aspect, like a portion of cauliflower bud flattened out. It was the induration of this disc and its characteristic appearance which made me feel quite confident in the diagnosis of cancer. I may add that this diagnosis was confirmed by the presence of some slightly enlarged but very hard glands in both groins, as also by the patient's age, which was near upon sixty.

The disease in this case had existed for about a year when I saw the patient. It may, perhaps, be best described by saying that the left part of the mons, the whole of the parts about the clitoris, the left labium, and the adjacent skin, were involved in a level mass of florid granulations, which were

raised at least a quarter of an inch above the surrounding parts. These granulations were everywhere suppurating freely, and they were everywhere clean and healthy. The margins of the patch were quite abrupt, and there was no congestion of the adjacent skin. On opening the labia it was seen that the diseased condition did not extend far upon the mucous membrane of the vagina, but its margin at this position was rather less abrupt than on the skin. Near to the clitoris there were a number of little polypoid developments; but nowhere was there anything in the least warty. There was not the slightest fœtor from the sore, nor any unhealthy discharge; but this was perhaps due to the great attention which had been paid to the dressings. Everywhere, with the exception of the middle disc, which I have described as being indurated, the granulating surface was as soft as it could possibly be. In this respect it exactly resembled the conditions of the sores in the groins in the case of Mr. ——, which I have described as an example of "Granuloma fungoides."

Mrs. Anderson excised the parts very freely a few days after the above notes were taken. Two months later she told me that the woman had recovered well, but that there was still some suspicious enlargement of the glands in the groin.

A portrait from this case is preserved in the collection of the College of Surgeons. A careful microscopic examination by my eldest son showed the presence of an epitheliomatous (cancerous) structure in all parts.

We are so much accustomed to associate an unhealthy surface and foul discharges with malignant ulceration, that I think it important to ask attention to the fact that cancerous surfaces may sometimes granulate luxuriantly, remain quiet, and assume an appearance which is most deceptively like that of a healthy sore. The unfounded belief that all cancerous sores show an unhealthy surface leads every day to errors in diagnosis which are most detrimental to the interests of the patient. Not only is it the fact that all cancerous sores may at times, and under certain modes of dressing, be made to assume clean and healthy surfaces, but there are, I believe, certain cases in which, from its beginning to the end, the ulceration spreads with the simultaneous production of

a clean granulating surface. Of this we have in the above case a remarkable example, but I have seen some even more definite in this feature.

Cancer of both Breasts. Rapid development of Leucoderma in an extreme form. Almost black discoloration of certain parts.

Dr. Scott, of Bath, sent to me a curious case in which leucoderma had, according to the patient's statement, developed rapidly, and in association (probably accidental) with cancer.

F. W., an unmarried dressmaker, 46 years of age, a brunette of small and slender frame. She was of bilious tendencies and had much acne in her face. Her right breast had been removed for cancer (Qy. adenoid) three years ago (Oct. 1886). Since then a growth had been taken from the outer margin of the other breast (left), and some glands from the axilla of that side. There were still, when she came to me, some enlarged glands in the left axilla. The growths were, however, very small. In the scars on the left side were some hard glossy lines (keloid or scirrhus?).

She asserted that at the time of the first operation she had not observed any changes in the colour of her skin. These changes were first noticed about eighteen months ago (this is possibly an error). At present the leucodermic changes have involved nearly the whole trunk, leaving only bands here and there of the most irregular form and of a deep brown tint. Both thighs and the whole abdomen were quite white, but on the genitals were some patches almost black with pigment. The pubic hair was in part white, and so also the scalp hair. Her neck still retained pigment, the crescentic borders of the blanched skin ending at its root. The face was not blanched. Two aunts, one paternal and one maternal, had died of cancer.

The leucodermic changes were very symmetrical. They affected the upper arm and shoulders less extensively than the trunk and lower extremities.

Yet another feature has to be mentioned. On the left upper arm was a large area of inflammation, with superficial ulcera-

tion and some induration. It was impossible to assert anything confidently as to this patch. There was nothing characteristic of cancer. In the right groin, or rather in the cleft between thigh and pudendum, was a patch of chronic eczema.

As regards the leucoderma, I should regard it as highly probable that the woman had made a mistake in her observation, and overlooked its early stages. Probably it had been slowly advancing for many years. It was an ordinary example of the disease, remarkable only for the extent over which, on the trunk especially, the bleaching had spread. There is probably no reason for thinking that it has any connection with the cancer. The woman had of late suffered much from pain in her back.

Whether the sores on the arm and in the groin had anything to do with the cancer was a question which, when I first saw the patient, could not be conclusively decided. I thought that they had not, and the result of treatment proved it. Mr. Waren Tay was kind enough to admit the patient under his care into the London Hospital, and under his treatment the sores in the arms soon healed. Numerous scars were left. The conditions of these ulcers was so peculiar and so apparently causeless, that Mr. Tay was even induced to suspect that they had been caused intentionally by snipping out portions of skin. If this were so, we have indeed a remarkable illustration of the remark that those who produce factitious diseases are almost always the subjects of some real malady. Here we have a poor creature, the subject of double cancer and of what appeared to be to her a formidable skin affection, not content with her realities, but seeking to evoke sympathy by artificial means. Although I by no means consider the diagnosis established, I must admit that the manner in which the sores healed when the woman was under hospital supervision strongly corroborated it.

I received from Dr. Scott, when the patient was sent up, very full notes of the case, and outline portraits showing the extent of the leucoderma. The tumour of the right breast had in the first instance been diagnosed as an adenoma. Dr. Scott confirmed the patient's impression that the pigmentary

changes were of recent development, and had commenced subsequently to the first operation. In the first instance the case had been regarded (as in fact leucoderma almost invariably is) as an example of increased pigmentation, and not of blanching. There could be no doubt that in some parts, especially in the genitals, there was proof of increase of pigmentation in those areas which remained dark. Parts of them were indeed almost black. I have noticed this condition of black discoloration of some parts with blanching of others in several other cases of leucoderma of the genitals in men. In all leucoderma cases the contrasts in colour are always, I think, greatest on the genitals. For the most part and in most cases, I believe that the suspicion of increase in pigmentation on the unblanched regions in leucoderma is a mistake in observation. Sufficient allowance is not made for the effect of contrast. The patient invariably asserts that it is the brown tint that is new, and that the skin was not originally of that colour. Very often the contrast is so strong that most observers agree with the patient, and think it impossible that the original tint could have been so dark. If, however, the white patches be covered and the effect of contrast prevented, then, with due allowance for the fact that the patient is probably of dark, swarthy complexion, there is nothing very remarkable in the depth of the brown tint. In some few cases, however, and in some special regions, I must admit that there is proof of real increase of pigmentation. Of this the present case is one of the most definite which I have ever seen.

NOTES ON SMALL-POX AND VACCINATION.

Whoever is familiar with the older literature of vaccination must have been impressed with the belief that our forefathers regarded it as a much more serious affair than we wish to, and were prepared to encounter risks and inconveniences against which we rebel. They lived nearer to the small-pox days, and had not forgotten their horrors. That the vaccination sores should inflame somewhat severely they were prepared for, and Jenner even spoke of "erysipelas" as being usual. That he did not mean erysipelas in our definite sense of the word we may well think, and yet believe that he expected much more inflammation than we are accustomed to see. So also as regards enlargement of glands in the armpit; they were accepted, even at no very distant day, as almost a matter of course.* A general vaccinia erruption was also apparently more common than it is now. Dr. Gregory's description of it is very full, but I have spoken with well-experienced operators who were unwilling to admit that any exanthem-like eruption ever did occur as part of vaccination. These facts may be held to indicate the probability that the lymph now in use has become sensibly weakened, and the practice of re-vaccination is more than ever important, the period of protection tending to become shorter and less complete.

The terms of gratitude in which Jenner's discovery was spoken of fifty years ago were indicative of the feelings of men far more familiar with the curse which had been got rid of than we are. I read the other day, in an old zoological

* In one of the cases which I reported in my last number, the presence of an indolent gland in the armpit was one of the facts which was held to be suspicious of syphilis. It would have been held to be the proper thing half a century ago.

work which enumerated the benefits derived by mankind from the domestication of the ox, the statement that "the cow has now acquired something of a sacred character from the blessings which through her have been reaped in the extermination of human disease."

Dr. Gregory's Description of Vaccination Lichen.

"It is not uncommon," says Gregory, "to find the child's body covered generally or partially with a papulous eruption of a lichenous character from the ninth to the twelfth day or even later. It is seldom seen in adult vaccination, but is frequent in children full of blood, in whom numerous vesicles had been raised which discharged freely. Vaccine lichen, as this eruption is properly called, often occasions great anxiety in the mind of the parent, from a suspicion that small-pox is coming out. I have seen it in such intensity as to be followed by minute vesicles; but this latter appearance is very rare. It is an accidental occurrence, chiefly attributable to the peculiar delicacy of the child's skin and fulness of habit. Like the constitutional irritative fever, it indicates that the disease has taken effect on the system; but it is not deemed essential to the success of the process."

Suggestions as to the Explanation of the Supposed Increase in the Mortality Rate of Natural Small-pox.

The much increased danger attending natural small-pox at the present time as compared with pre-vaccination times may be explained in different ways. In the first place it is both possible and probable that there is great exaggeration in the statement of difference. The statistics of the last century may be quite untrustworthy. If, however, we may assume that it is true that small-pox in the unvaccinated is at present a more severe and fatal disease than it was in populations no part of which had been submitted to vaccination, it is still possible to suggest a plausible explanation. It is universally admitted that all specific fevers are more severe and fatal in virgin populations, or,

in other words, amongst those who in previous generations have not suffered. It is probable that an attack of a specific fever not only for the most part exempts the individual from another attack of the same, but also influences for good his offspring. The children of such parents, although liable to the disease, are not liable to such severe attacks as others. Now it is fully admitted that an attack of small-pox exercises a better and far more lasting protective influence than does vaccination. Those who have had small-pox very rarely indeed suffer from a second attack; on the contrary, a large majority of those who have been vaccinated in infancy become liable after puberty both to the infection of small-pox and to re-inoculation of vaccine. It is therefore clear, since re-vaccination is unfortunately not the rule in England, that a large proportion of children are born to parents who have themselves outworn the protection of their infantile vaccination. Such children will probably inherit but a very minor degree of modification of constitution as regards susceptibility. In the past century (pre-vaccination times) a large majority of the population suffered from small-pox, and this mostly in early life. Thus most children would be born to parents one or both of whom had passed through the disease. It is clear, then, that at present, after three generations of general vaccination and an enormous diminution in the prevalence of natural small-pox, there must be a large general reduction in what may be called hereditary protection. We are passing into the condition of a virgin community so far as small-pox is concerned, and possibly approach the kind of liability which was exhibited by North American Indians and other native tribes when they first received the contagion. If this be so, it is further clear that those who refuse vaccination amongst a community in which the practice of vaccination is common, incur in case of infection with small-pox a far greater danger than was the case in the community of the last century. In return for this augmentation of danger they share in the common advantage which general if not universal vaccination gives as regards the diminished risk of being infected. It is far less probable that they will be infected than it was in the eighteenth century; but should they be so, they will

probably suffer with much increased severity. It is obvious that the fact stated, and its explanation, constitute a very strong argument indeed in favour of re-vaccination.

The Statistics of the Small-pox Epidemic in Sheffield during 1887–1888.

The proportion of attacks in the vaccinated population was 1·62 per cent.; in the unvaccinated population, 15·68 per cent. The proportion of deaths in those attacked was, in the vaccinated 4·7 per cent.; in the unvaccinated, 31·1 per cent. Thus it would appear that in case of small-pox prevailing in a mixed population the unvaccinated are in ninefold danger of being attacked, and when attacked incur sevenfold greater risk of death.

I take these figures from the admirable report prepared for the Local Government Board by Dr. F. Barry (see pages 194 and 196).

On "Insusceptibility" to Vaccination.

From Dr. Barry's report I also take the following in reference to the important subject of insusceptibility to vaccination. It would seem very probable that there is no such thing as real insusceptibility, and that the correct phrase would be "difficult of inoculation." I am acquainted with a lady who in infancy (sixty years ago) was reported "insusceptible." Yet she took natural small-pox, had it very severely, and was left dreadfully scarred.

"From the above table it will be seen that of the 57,532 children vaccinated by the public vaccinators of Sheffield only 1, or 0·002 per cent. of the whole, was certified to be "insusceptible" of vaccination, whilst of the 33,886 children vaccinated by private vaccinators, 96, or 0·284 per cent., were certified to be "insusceptible" of vaccination. There can be little question that the failure on the part of private practitioners in so large a number of cases to obtain successful results was less due to want of skill than to the use of stored lymph, whilst the uniform success of the public vaccinators was due to the fact that they were always able to

vaccinate from arm to arm. In the sub-district reports it will be noticed that cases returned as "insusceptible" of vaccination were in some instances subsequently vaccinated successfully, and from the death returns it will be seen that two persons who had been certified to be "insusceptible" of vaccination died of small-pox" (from page 186).

On Second Attacks of Small-pox.

The following quotation, which I again take from Dr. Barry's report of the Sheffield epidemic, is of much interest in reference to the occurrence of second attacks of small-pox. The facts given prove that second attacks are not of extreme rarity, and make it probable that certain persons are by idiosyncrasy peculiarly susceptible to them. Referring to a table which is given, Dr. Barry writes:—

"It appears that 18,292 persons, or 6·6 per cent. of the enumerated population of the borough of Sheffield were stated to have suffered from small-pox prior to 1887, and that in 23, or 0·13 per cent., second attacks occurred during the present epidemic, of which 5, or 0.3 per cent. of this 18,292, proved fatal. A detailed account of each of the 23 cases will be found in the sub-sections referring to the several sub-districts. Thirteen of the 23 had been vaccinated in infancy, whilst the remaining 10 had never been vaccinated. In 14 the second attack of small-pox was very mild, and was not followed by pitting. Two persons, aged respectively 35 and 20, who had suffered from attacks of small-pox in 1865 and 1872, had second attacks more severe in character, though not followed by pitting. A person aged 44, who had had a severe attack of small-pox in 1870, followed by blindness, had a second attack, also severe in character, and followed by much additional disfigurement. A person aged 19, who had suffered from small-pox in 1871, had a second attack, which was severe in character, and followed by considerable pitting. Other five persons died of their second attack of small-pox. It is remarkable that five second attacks of small-pox should have proved fatal, whilst only one attack did so in a revaccinated person. It is also noteworthy that

0·13 per cent. of the persons who had suffered from small-pox prior to 1887 had second attacks during the present epidemic."

It is possible that the idiosyncrasy which involves liability to second attacks of one specific disease may extend also to others. I published many years ago a case in which a gentleman passed through two attacks of syphilis, both of them under my own observation. This gentleman had also had two attacks of small-pox, although he had been vaccinated. Neither of the attacks were severe, nor have either of his outbreaks of syphilis left any sequelæ. It is twenty years since the last, and he is now in good health.

It is now a well-established fact that second attacks of syphilis are not very infrequent. I believe that even third attacks may occur.

Re-vaccination and its Results.

During the epidemic in Sheffield there were 830 soldiers in barracks, all of whom had, in accordance with army regulations, been re-vaccinated. These men were allowed to visit their friends without restriction, and the barracks were in the part of Sheffield first affected by the disease. Of the 830 twelve only contracted small-pox, or 1·4 per cent. Of these one died. Inquiry elicited the remarkable fact that in all the twelve cases the re-vaccination had been unsuccessful. No single soldier who had been successfully re-vaccinated contracted small-pox.

There were 372 policemen in Sheffield during the epidemic. All had been vaccinated in infancy. Ten of these contracted the disease prior to February, 1888, when all were re-vaccinated. After the re-vaccination none were attacked (see page 205).

Of 290 men and boys employed in the post office, all of whom, in accordance with regulations, had been re-vaccinated, not a single one contracted small-pox in any form. It is obvious that they would run special risks as regards exposure.

ON CERTAIN LOCAL DISORDERS MORE OR LESS COGNATE WITH RAYNAUD'S MALADY.

The original name for the group of symptoms which we now know as Raynaud's Disease was "Symmetrical gangrene of the extremities." We may suitably keep this in mind, as it will help us to remember what is the culminating feature of the malady. As a matter of fact, gangrene occurs only in a very small minority of the cases; only, in fact, in the most exaggerated examples. We have widened the definition, and made it include all marked forms of liability to recurring derangements of the circulation in the extremities which are marked by defective arterial supply. With perhaps scarcely an exception, we still insist upon symmetrical development of symptoms as an essential feature, and in doing so we imply that the conditions induced depend upon general and not upon local causes. Obliterating arteritis may lead to gangrene, but it is not Raynaud's disease, and may be one-sided—indeed usually is so. Senile gangrene again depends upon defective arterial supply, but it is caused by permanent changes in the arteries. It is not paroxysmal, and it is not often a symmetrical disease. Whatever may be the case in its later stages, one primary conception of Raynaud's phenomena must, I think, be that they are manifestations of functional derangement. We trace them upwards in all gradations from conditions which can barely be considered in excess of normal states, up to the more extreme developments which are attended with risk of gangrene. Every one is liable, though in very various degrees, to have the hands, ears, nose, &c., become blue when the body has been unduly exposed to cold. In all, the stage of blueness—which is marked very differently in different persons—shows, if the cause be continued in operation, a tendency to pass into whiteness.

The first is the so-called stage of asphyxia, the latter of arterial spasm, and both are due to a narrowing of the calibre of the arteries under reflex stimulation, or rather possibly of inhibition. Thus all persons may be said to be potentially the subjects of Raynaud's malady, but we do not give the name until the proclivity, normal at first, has become so much exaggerated as to induce definite inconvenience and amount to a disease. In the later stages changes may have occurred in the nerves, the results possibly of neuritis; but in the beginning, I repeat, we must regard the disease as functional.

It is not to be wished that the term "Raynaud's disease" should be widened so as to include cases of a different character to those which he described. It is, however, essential to correctness of thought and accuracy of classification that we should recognize other results than a tendency to gangrene, as allied conditions. It may not be too much to assert broadly that all changes in the circulation and nutrition of the extremities which are brought about by the nervous system, and which occur in the extremities, because they are peripheral, and at a disadvantage as regards the influence of cold and their supply of blood, are, in essential nature, allied to the disease in question. The changes in nutrition thus caused are not always characterized by a tendency to gangrene. The peculiar proclivity mentioned may in some cases exist in a sort of partnership with other disease-producing influences. Thus it may be associated with tendency to chilblains, or to gout or rheumatism, or to eczema. A malady which I described many years ago under the name "last-joint arthritis," and of which the peculiarity is that the terminal joints of all the digits become disorganized, is probably a partnership between Raynaud's proclivity and inherited gout. Many cases of diseased nails and of chronic eczema of the ends of the fingers are probably in part due to abnormal susceptibility of the arteries to the influence of cold. Nor must we restrict our attention to the ends of the digits, for it may be the palms and the soles, or even parts still higher up which have their nutrition disturbed under the same proclivities. The nose and the ears are generally included in the term ex-

tremities, and to them I would venture to add the lips. The lips, as is well known, easily become blue with cold, though not so readily white; and although they are not liable to gangrene, yet it is not improbable that the cracked and peeling conditions which are often very troublesome in delicate persons, are states which are brought about chiefly through the agency of disturbed circulation. My desire is not to in the least alter the accepted meaning of the word, but to gather around Raynaud's malady a family group of other conditions cognate with it.* Of such I will now proceed to relate some examples.

An example of Nasus Mortuus, being an instance of very remarkable liability to painful coldness of the nose with lividity (Asphyxia of Raynaud). Possible influence of previous attacks of Intermittent Fever and of Quinsy. Influence of air in motion more marked than that of either heat or cold.

The subject of the following narrative is Miss E. R——, aged 25, a dressmaker. She was sent to me for observation by my friend, Mr. Benjamin Clark, of Clapton, who had taken great interest in the very curious phenomena which she presented. The chief of these was a liability to have her nose "die" in the same sense and manner that many persons are liable to dying of the fingers from exposure to cold. Her nose used to become cold on the slightest provocation.

It will be seen that the condition of dying of the nose to which she was liable was not attended by the tallowy pallor which mostly occurs in cases of what is known as "digiti mortui." It was rather the delayal of venous circulation, which Raynaud has named asphyxia, and which usually precedes the stage of pallor.

The following somewhat fragmentary notes were written during the girl's first visit to me.

Miss E. R—— is pale, and not very well developed. She

* For the fullest information as to Raynaud's Disease, the reader is referred to a volume published by the New Sydenham Society. The translations, &c., are by Dr. Barlow.

states that her menstruation is always behind time, but rather profuse. Her pharynx is mammillated, but the tonsils are not materially enlarged.

She is liable to catarrhal attacks, and when she has a "running cold" her nose, she says, keeps warmer.

When 12 she had an "intermittent fever." She had another illness ("low fever") two years ago, but this was two years after she had become liable to "cold nose."

The cold nose first came after a very bad attack of quinsy. She had had about ten bad quinsies; the last and worst attack was when she was nearly 21. She was very ill, and for seven days could take nothing but a little fluid food. She was made very weak, and never afterwards quite regained her health. It was not, however, till a year after this that her liability to cold nose began. It was in January that it began, and her first attack was after she had been out on a very cold day.

The nose is now always worse in winter, but its liability to die is never wholly absent even in summer. She is not liable to cold hands or feet, excepting in winter weather, and even then they do not suffer much. She has formerly had slight chilblains, but not bad ones. She says that her nose is never the same more than two hours together, unless she keeps absolutely still. Movement is the influence which she chiefly blames for causing the coldness. She has known it to become very cold on a very hot day. Her hands are not mottled.

There are not any very visible changes in the nose when cold, excepting that it becomes "of a bluey-red." When warm it is pale. No rubbing will warm it, nor do hot rooms prevent the attacks. It is very painful to her when it is cold. The coldness is not limited to the tip, but includes the whole nose from the root. During the time when she was ill with fever, it did not become warm even in bed, although there was a fire in the room.

She dare not go to the seaside on account of the pain caused. "It was dreadful once at Brighton, and I was glad to come home." She dare not take a bath, or wash in cold water. She has never been liable to "dead fingers." Even in summer, if she moves across the room her nose will

become cold when it has been warm whilst sitting still. It is always cold when she goes to bed, but slowly gets warm afterwards. If, however, she turns in bed it may become cold again.

It is a very variable phenomena, may be present for ten minutes and then gone again ; " there is no dependence on it." I wanted her to go out into the street and let me see it cold, but she said that it might from the excitement become warm again as soon as she came into the house. Yesterday, when she got out of bed it was all right until she put her feet on the floor, then it became cold. It remained cold for a quarter of an hour, and then, whilst busy, it remained warm. Soon after three, just as she was preparing to go out, it became cold, and remained so till five and until she had half finished her tea ; then it became warm, and soon afterwards became cold again, and continued so until she had been some time in bed.

Ever since the last fever she has been " a chilly subject," but was not so before it. She has been liable since the fever to have horripilation in her arms and legs ; the skin goes " goosey." Any emotion will cause it. The sensation runs, she says, " all round from the waist and down all the limbs."

It may perhaps appear to some of my readers that in the above narrative I have devoted much attention to a trivial symptom. I do not think so. The case has much value as a rare example of extreme exaggeration of a proclivity from which many persons suffer more or less. It illustrates important laws both in physiology and pathogenesis. We have first the fact that the girl's nervous system had been enfeebled by intermittent fever and the semi-starvation induced by a bad quinsy. Probably she had congenitally a somewhat feeble circulation, and she was of the female sex, unmarried, and liable to too profuse menstruation. We may assume as a probable fact in anatomy that there are certain local arrangements of the vaso-motor system by which the circulation is regulated in certain parts, and which may become the seat of disease. The disease in this instance was probably not structural in any marked degree, but partook rather of the nature of pathological habit, or remarkable proneness to

disturbance of function. Although we are obliged to invoke the supposition of peripheral damage to explain the local limitation of the phenomena, yet we must remember that in the excessive proneness to horripilation we have proof of general enfeeblement and irritability of the nervous system of the skin. The girl was certainly below par as regards her nerve tone. Although I do not know that I ever before encountered a case in which the proneness to cold nose had become a source of annoyance to the patient, yet no doubt there are various degrees of liability. In cases of permanently dry mouth (xerostomia), we have to deal with an exaggeration of what in lesser and temporary forms is a very common physiological liability. It is just so in the present instance, and the case must stand, with many other forms of disease, as an instance of the morbid exaltation to an almost grotesque height of a natural endowment of the structures.

The treatment which I advised was the long continued use of arsenic and quinine, in the hope of giving vigour to the enfeebled vaso-motor system. With this was to be combined the use of electricity as recommended by Raynaud for the parallel liability in the extremities.

A Case of severe and long-persistent summer Prurigo, affecting only the exposed parts.

Mrs. C——, the wife of a clergyman, offers a very good example of a long persisting summer eruption. It takes the type of a papular prurigo, and has been so named by several authorities. With one temporary exception it has always been limited to the exposed parts. Her face, neck, and hands, with lower parts of forearms, are covered with papules, and the skin, from the long-continued irritation, has undergone a certain amount of thickening, and is rough and coarse. Although always much worse in summer, the eruption does not wholly leave her in winter. She has naturally an irritable skin; gnats bite her freely and cause much annoyance. Sea air always irritates her face. In the summer she has, she says, often had the face much swollen. Her eruption has caused her great distress, and beginning

with Sir Erasmus Wilson twenty years ago, she has since then been under a succession of specialists without much benefit. Her condition when she consulted me in October, 1889, is well shown in the two drawings which were taken for me by Miss ——. These drawings show the whole face covered with erythematous papules, and her hands and lower parts of forearms in like condition. The papules are rather ill-defined, but there is no general eczema. The restriction of the papules to the exposed parts is most definite. Her features have been somewhat altered by the thickening of the skin. Her feet are affected much like her hands, but not so severely.

Mrs. C——'s history is that up to the age of seven she had a very clear skin. She then went on a visit to a farmhouse during a very hot summer, and returned home with her face, &c., covered with eruption, from which she has never been quite free since. On her hands blisters not unfrequently form, but on the face the condition is never more than erythema with swelling. She never suffered from urticaria, and has not had chilblains badly. Her mother was formerly a great sufferer from chilblains. On one occasion the eruption spread to the body (during summer), but it only lasted there for a month. Mrs. C—— is liable to bad catarrhal attacks, and has twice had pleurisy. Not long before her visit to the country, when the disease began, she had suffered from a bad attack of measles, followed by jaundice. She has been twice vaccinated, and on neither occasion did any prurigo follow.

Mrs. C——'s case much resembles the examples of what I described some years ago as prurigo adolescentium, but it has persisted longer than usual. I have recently had under observation two other examples of the same in ladies of adult age, both about 30. One of these, Miss I——, has had her eruption from childhood, and the other, Miss ——, sent me by Mr. Jessop, of Leeds, gives an almost similar history. In neither has the eruption been so severe as in Mrs. C——, and both have much benefited under treatment.

A type-case of extreme susceptibility to the influence of sun-rays. Erythema of face and hands invariably produced by exposure.

I am indebted to the zeal of Mr. Lewis Mackenzie, of Tiverton, for the opportunity of recording the following very remarkable example of susceptibility to the influence of the sun. On two occasions Mr. Mackenzie sent the patient up from Devonshire in order that I might have an opportunity for observing her ailment. The latter consisted in an entire inability to bear the slightest exposure to sun without having her face and hands become suffused with erythema. Miss C—— is a lady's-maid, aged 28. She is florid, comely, and of healthy aspect. She is not in the least hysterical. Her liability to suffer from erythematous swelling of the face and hands on exposure to the sun has been present for three years. It began, she says, suddenly, in consequence of a slight blow from a whip lash whilst driving in an open conveyance on a very hot day. This raised a wheal, and on reaching home on this occasion her face swelled, and she has never since been able to bear the slightest exposure. As a child, she could bear both sun and wind. She has, however, often had chilblains, and her feet are habitually cold. She can take a cold bath without feeling unduly chilled. That which she cannot bear is simply exposure to the rays of the sun. It does not matter whether it is winter or summer, if the sun is allowed to shine on the face or hands, erythema and swelling are the speedy results. She is always well on cloudy days, and on sunny ones so long as she remains indoors. The erythema always begins on the part first exposed, but it will rapidly travel to others. On one occasion, at Mr. Mackenzie's suggestion, she tried the effect of exposing one foot to the sun, and it swelled and became red just as her hands were accustomed to do. If she keeps her hands covered they are safe, and for this purpose the thinnest gloves suffice. The erythema is attended by burning and great irritation, and each attack usually lasts an hour. In winter the hands may become dusky, but in summer they are of a vivid red. After the swelling has passed off, there is usually a powdery desqua-

mation of the parts which have suffered. After an attack she generally has a bad headache and cannot sleep. The attacks usually affect her sight and make her eyes weak and watery. So extreme has become her susceptibility, that she never ventures voluntarily to expose either her hands or face even for the shortest time to the influence of the sun. The glare of a fire she can bear as well as other people. It makes her cheeks flush, but does not cause the tingling, swelling and spreading redness which invariably follow exposure to sun.

I asked her what would happen if she continued to be exposed to the sun after the attack had begun. She replied that it was attended by so much irritation and headache, that she thought if long continued it would drive her mad. As it is, the attacks often make her feel bewildered and as if her head were on fire. She has never had more than one attack in a day. On the first occasion that Miss C—— called on me there was nothing whatever to be seen, and I thought that she was exaggerating her sufferings. On the next, however, it was a bright sunny day, and she walked in the air with her face exposed for a quarter of an hour, just before coming into my room. There was no mistake about the reality of the condition. A violet-tinted erythema had begun on the upper parts of her cheeks, and had extended over her nose, eyelids, and forehead. Whilst she sat before me it spread rapidly over the whole face, ears, and downwards on the neck. She said that it was attended by a feeling of stiffness, with burning and intense irritation.

As already stated, Miss C—— appeared to be in good health. She was liable, she said, to cracked lips, and often had her mouth unnaturally dry.

COMMENTS ON THE CASE.

I give this case as a type example of the class to which it belongs. Many more or less similar come under observation from time to time, but not many in which the phenomena are so simple and definite. It will be observed that the liability was an acquired one, and that it did not exist in the slightest degree in childhood. It must take rank as a sort of pathological habit. Although the phenomena evoked were very

different from those in the case of nasus mortuus, yet both probably depend upon an acquired susceptibility of the local vaso-motor system. In the one case arterial paralysis and dilation resulted; in the other, arterial spasm and venous turgescence. The one is in some sense the converse of the other.

On a future occasion I shall have to ask attention in more detail to the general influence of sun and summer temperatures, in producing inflammation of the exposed parts. There are cases in which summer produces not only erythema or eczema, but a very severe vesicating dermatitis, with large ulcerations followed by scars. One such I have already published in last year's Clinical Society's Transactions, but I have one or two others yet more marked to follow.

The case just narrated helps us to the comprehension of these more severe ones. In it we see definitely proved the power of the sun to evoke erythema, quite independently of any special over-heating, and we note that it was wholly different from the much greater heating power of a fire. In the summer eruptions, also, it appears very probable that it is rather the active influence of the light-rays which evokes inflammation than any heating power. In this matter some important and very ingenious experiments by Dr. Bowles, of Folkestone, as to the influence of the sun in mountainous districts, and especially in snow, in causing blistering of the face, come to our aid. It is clear that in studying the causes of local skin inflammations we must seek to find detached examples of the power of each influence separately. In some persons the heat of a fire will cause erythema, or eczema, when exposure to the sun can be borne well. In others the sun irritates and fire heat does not. In some the exposure to wind or to cold is injurious, and the skin is comfortable only when the weather is warm. Again we may note with interest the very different results which ensue in different individuals from one and the same cause. In some, sun and wind (or perhaps sun alone) cause freckles, whilst in others erythema or eczema, with vesications, result. The extreme development of such affections we see in the disease known as "Xerodermia pigmentosum," or better, I think, as "Kaposi's Malady." If

we would understand these complicated diseases we must try to analyze the causative influences at work; and as presenting us with a very definite example of one of them, the case which I have narrated is, I think, of much value.

Long and deep fissures in the palms and soles persistent for several years. In association with enfeebled circulation and Hysteria, in a delicate young lady.

The distressing affection from which Miss R—— suffered was the formation of deep and inflamed fissures along the lines of flexure in her palms and soles. There had also occurred occasionally sores in other parts. The fissures were so painful as to disable her from the use of both hands and feet. There was no general inflammation of the skin either of the palm or sole, but simply long lines of fissure with slightly hardened edges which took precisely the position of the normal creases, crossing more or less obliquely from side to side. In each palm there had been three of these, but those in the right had healed. In the soles they were less regularly placed and more numerous. The fissures caused great sense of pain when the hand was opened. In addition to these fissures there was inflammation of all the nails of the toes, with slight suppuration under them (a mild form of sycosis of the nails). This, however, had come on subsequently to the formation of the fissures in the skin. A yet more recent addition to the case was the formation of a transversely oval ulcer exactly on the front of the left knee, and of a similar one on the back of one of the middle joints of the right ring-finger. These ulcers, I was told, had begun as two or three parallel transverse fissures which had coalesced. It is to be repeated that there was not the slightest tendency to diffuse inflammation of the skin anywhere, the disease being closely restricted to the parts named, and the adjoining skin being pale and perfectly healthy. Her fingers were taper and thin, and her nails were not affected.

Miss R——'s affection had begun by cracks in the palm of

one hand (the right) about a year and a half before I saw her, and although she had had a great deal of careful and very judicious treatment, these cracks had never healed. They began in winter, and although they improved in summer did not get quite well, with the exception of the left palm. It was not until six or eight months later that her feet suffered.

As to Miss R—— herself, she was a fair-skinned, somewhat delicate-looking lady of a highly nervous temperament, but of remarkable intelligence and of a bright and cheerful disposition. Her age was twenty-seven. Although at the time of my first visit the hands were not cold, and there was no very obvious feebleness of circulation, and although she asserted that she was by no means a chilly subject, yet she had suffered somewhat from chilblains in childhood, and I have no doubt that there was a decided tendency to unequal distribution of blood in the extremities. Her feet and hands would become icy-cold and blue on the slightest exposure. The limitation of the disease to the lines of fissure was so peculiar and so definite, that the suspicion crossed my mind for a moment that she might have produced or aggravated the disease by some caustic. The disease of the nails of the toes, however, was of a kind not in the least likely to have been factitious; and I should probably not have entertained the thought had it not been for her general hysterical bearing.

On a second visit (June 13th) I got a few additional facts. Although I could not detect any tendency to xerodermia, yet she assured me that her skin had always been very dry, and that she had great difficulty in perspiring. She could dance in a hot room and never have the skin become in the least moist. If she became really heated, which was seldom the case, she felt uncomfortable, but never broke into perspiration. She also said that her feet varied much, and that at times they were somewhat swollen and would ache. She had never suffered very badly from chilblains, nor did her hands chap much. The prolabium of lower lip was dry and somewhat crusted, and she had sometimes cracks in it. She complained of difficulty in passing water, and often had to wait some time. At the time that her hands began to crack she was in her

usual health, and excepting that the affection began in cold weather, she could assign no cause for it. She had been treated by all kinds of ointment and by caustic in the cracks, and she had had her fingers bandaged down into the palms for weeks together, but, as stated, only one hand had been cured. The feet, which began last, had got worse, and the sores on the knee and knuckle were both of them new. These last both showed decided tendency to soft granulation outgrowth. Remembering the fact that in two other similar cases I have noticed congenital xerodermia in conjunction with fissured palms and soles, I have little doubt that there is in Miss R—— a predisposing element in her congenital peculiarity of skin. Next it is probable that the generative system exercises an injurious influence on the circulation in the extremities, especially in the feet, and thus disturbs their nutrition. Seeing that all four extremities have been symmetrically affected, it may seem almost absurd to attempt a cure by local measures. Arsenic has already been fully tried, and it is difficult to suggest any other remedy in which much confidence can be placed.

Miss R—— remained in London under my observation during July and August. During this time she was confined to her couch, and almost wholly disabled from the use of her hands. She was carried into a Bath-chair once or twice every day, when suitable, for exercise. We did our utmost to induce her to take food liberally. I used a great variety of local applications, mercurial ointments in various forms, the liquor arsenicalis as a stimulant, nitrate of silver and the acid nitrate of mercury as caustics. She took wine and tonics, and with the latter small doses of opium. Nothing had the slightest influence on the fissures. The sore which she had on one knuckle healed, but the very troublesome ulcers which had formed in front of one knee, would not heal. As a last resource I persuaded her to let me encase the feet in plaster of Paris. The cases were kept on for three weeks, and at the end of that time all the fissures were found to be healed. No sooner, however, had the cases been removed than the fissures began to re-open. Her hand had meanwhile remained in the same condition.

In the beginning of September I persuaded Mrs. R—— to take her daughter to Worthing. Whilst there she was placed under the care of Mr. Harris, of that place, by whom zealous endeavours were made to get the fissures to heal, and to improve the general health. Nothing, however, proved of much use, and in the end of October Miss R—— was in much the same condition locally, and had somewhat lost flesh. The sore in the front of the knee had healed, but another new sore had formed on the side of the leg. The cracks in her soles were as bad as ever.

Here for the present I must leave the narrative of this perplexing case. At some future time I may be able to give further particulars. It seems probable that we have to deal with extreme susceptibility to motion coincident with great enfeeblement of circulation in the extremities. What more to suggest with a view to cure I do not know. Since all four extremities are affected alike, it is clearly constitutional, and merely local measures are scarcely likely to secure permanent results. Everything has, however, been done in the way of change of air, tonics, wine and diet. Season seems to exercise but little influence, and Miss B—— alleges that she always feels better when it is cold and bracing. Otherwise change to a really hot climate might have seemed a judicious measure.

An example of Fissured Lips in association with Slight Xerodermia, and liability to Fissures in the Palms. Great susceptibility to cold.

A gentleman who consulted me because, to his great alarm, he had just discovered his papillæ circumvalatæ, proved of much interest in another direction. He had a deep cleft in the middle of his lower lip and two in his upper lip. Those in the upper were placed one under each ala nasi, so as to mark out a central portion, just as in double harelip. The result was to give to his mouth a curiously animal appearance. The fissures, although very deep, were not, at the time that I saw them, sore. They were the result of repeated attacks of cracked and inflamed lips, which had begun in boyhood. He

had also, he said, got into the habit of picking them, and had thus aggravated the deformity. There was no great thickening of the lips, and the prolabia were not much crusted. The case much reminded me of a young lady who, many years ago, was brought to me by Dr. Barnes, having six or seven deep bleeding fissures arranged symmetrically in both her lips. I have never seen another case exactly like hers. A central crack in the lower lip is of course very common; the two lateral ones in the upper, although perhaps not very rare, are less so. My patient told me that he had formerly suffered very much from cracked palms and fingers. Especially had his fingers been liable to have cracks form at all their creases. These cracks were always worse in cold weather, but were seldom wholly absent. He had often been quite disabled by them, and could never go for ten minutes into the open air without gloves on. Cracks would form also at the tips of his fingers, radiating across their pulps. No one, he said, who had not experienced them, could conceive how painful such cracks were. The back of the hand usually suffered from ordinary chapping. The palms were very dry. He told me that his whole skin was dry with the exception of his face, and on exposing one leg I found it in a well-marked condition of xerodermia (the pityriasis or slightest form). The soles of the feet had not suffered. There was no family history of xerodermia. The patient was the only one living, but he had had three sisters, and none of them, so far as he knew, had suffered from dry skin. All three had died of phthisis in early adult age.

Ulcerating Blains in both ears persisting for five years at all seasons in a healthy young man. Probable influence of habitual exposure to sea-air and wind.

The occurrence of ulcerations on the ears, very like those which I have described as occurring in the severe forms of summer eruption, but in this instance without any accompanying sores on the face, was exemplified in the case of a young married man who came to me from Margate. He was twenty-six years old, and apparently in good health. His

parents were living, and there was nothing noteworthy in his family history. In boyhood he had been much troubled with chilblains on his feet, but the liability to them had seemed to cease some years before his ears inflamed. He wore his hair short and his ears fully exposed, and he was in the course of his avocations much out in the sharp sea-air of Margate. His ears had begun to suffer five years before I saw him, and had never since, either in summer or winter, been quite well. He did not admit that he had noticed much influence from season, but I may remark that he came to me with them worse than usual towards the end of the summer of 1889. The ears were always dusky and bluish, and at times they became covered over the helix and adjacent parts by vesicles, which ulcerated and left scars. The borders of the helix had in both ears been deeply eroded, and the condition caused him much annoyance from the disfigurement induced. The condition was very near to common lupus, but there was no proof of actual new growth (apple jelly), and the symmetry was well marked. The initial lesion was a vesicle or "a little festering spot which became covered with a scale," under which ulceration took place.

I feel little doubt that this case should rank very near to the "chilblain-lupus" group. Probably the tissues were susceptible as regards sun-heat, cold wind, and sea-air, and thus at all seasons the blains * were kept up with variations of severity. It is interesting that there had been no indications of susceptibility in the nose or any part of the face, and that the liability to blains upon the feet and hands had ceased. I advised him that the most rational measure was to wear his hair long, and thus protect his ears; but he was a horse-dealer, and greatly objected to the alteration in personal appearance which this would cause.

He had exhausted a great variety of treatment before coming to me, and said that his experience was that all ointments had seemed to irritate. A sulphate of zinc lotion had, he thought, suited best.

* I have used the term blain in the above narrative as applicable to a dusky erythematous swelling with tendency to ulcerate such as we see in chilblains. All blains are not, however, of the chilblain causation. We may have sun-blains, fire-blains, or blains which are due to exposure to wind and air. We seem to want a generic term for these formations, and I would propose to call anything a blain which resembles a chilblain, but is not due to chilling.

NOTES ON HEREDITY.

The attitude assumed by modern biological inquirers as to the laws of heredity is somewhat alarming to those who have sought to apply those laws in the domain of pathogenesis. The element of what is now called Lamarkism is to be wholly removed, and it is to be henceforth denied *ex cathedrâ* that peculiarities acquired by the parent can be transmitted to offspring. This I take to be the assertion of Professor Weissmann and those who think with him. They teach that heredity itself can be accounted for only by assuming the permanence of the germ-plasm; and this permanence is inconsistent with the belief that such plasm can receive modification from what happens in the rest of the body. All changes in the plasm must originate "spontaneously." Such, at least, is the more obvious impression derived from reading Weissmann's Essay. I should be most sorry to be needlessly controversial, or to charge the new creed with doctrines which it does not profess. The author I have quoted distinctly admits that certain "indirectly acquired characters"* may be transmitted, but still he would limit the class to those which are due to spontaneous changes in the germ. The question for us, as pathologists, is therefore as to what are the changes which the germ-plasm may, during the lifetime of the individual, spontaneously take on.

Huxley would appear to understand Darwinism to accept Lamark's opinions as being of wide bearing. In his brief sketch of "Biology" in the *Encyclopædia Britannica*, he writes: "Mr. Darwin has further endeavoured to give a

* See foot note in reply to Orth's criticisms on p. 411 of Weissmann's "Biological Memoirs," published by the Clarendon Press.

physical explanation of hereditary transmission by his hypothesis of Pangenesis, while he seeks for the principal, if not the only, cause of variation in the influence of changing conditions."

"No strictural modification is so slight and no functional peculiarity is so insignificant in either parent that it may not make its appearance in the offspring. But the transmission of parental peculiarities depends greatly upon the manner in which they have been acquired. Such as have arisen naturally . . . tend to appear in the progeny, . . . while artificial modifications . . . are rarely if ever transmitted."

Some of the problems as regards the transmission of acquired peculiarities in reference to disease, may be stated, and possibly solved, as follows:—

Can a parent transmit to offspring a specific particulate virus which has been personally received into the blood?

The answer to this in the case of syphilis, and probably also of small-pox, appears to be conclusively in the affirmative. It is highly probable that a similar answer should be given as regards bacillary tuberculosis and some other proved bacillary diseases.

Can a parent transmit to offspring a condition of depraved health, which has resulted as the more or less remote consequence of a specific and particulate poison personally received into the blood?

The answer to this it is far more difficult to give, but the probability would appear to be in the negative. The children of syphilitic parents inherit either syphilis itself or nothing. If they do not show signs of syphilis they appear often to be in perfect health, although one or both parents may be suffering severely from tertiary forms of disease.

Does a parent whose body has passed through a specific disease, and who in consequence is no longer personally susceptible to another infection, transmit to offspring any degree of insusceptibility or of modified liability to suffer?

The reply to this double question would seem to be that no actual insusceptibility, or at most a very restricted one, can be transmitted, but that it is usual, perhaps almost invariable, for the offspring of such parents to suffer in much diminished

degree of severity. This is shown, or at any rate made probable, by the universal testimony that specific diseases, when introduced into virgin communities, prevail with a severity vastly in excess of what is ever observed in communities in which the diseases in question have been long prevalent.

Can a parent transmit to offspring any peculiarity of general health, of organic function, or of tissue-change or proclivity, which has been gradually acquired personally in connection with habits of life or exposure to prejudicial influences? In other words, are such diseases as gout and other forms of malassimilation hereditarily transmissible?

We may take it for certain that by living freely on meat, beer, and wine, and taking but little exercise, a person may become "gouty." By that expression is denoted that he may acquire peculiarities of digestion and of excretion, and may modify the elemental structure of his tissues. The structures composing his joints, those of his blood-vessels, probably those of his skin, muscles, bones, in fact his entire body, will receive certain modifications owing to their having been nourished during long periods by the blood of a gouty state. Can these acquired peculiarities be transmitted to offspring?

In reply to these questions it may be said, I think, without any danger of contradiction, that the children of those who have long suffered from gout do inherit peculiarities of function and of tissue. Quite independently of attacks of ordinary gout, and of personal habits likely to have conduced to such, the offspring of gouty parents are prone to inflammations of the eye and of joints, to defects of assimilation and of excretion which are wholly peculiar. Some of these are very well specialized, but probably there are a great number of less marked maladies occurring in the early life of the children of the gouty which are in this relation.

RECORDS OF INTESTINAL OBSTRUCTION, WITH ESPECIAL REFERENCE TO SYMPTOMS AND TREATMENT.

(*Continued from page* 140.)

In continuing this subject, I purpose to do so on the plan pursued in my two former papers of citing individual facts and cases for comparison one with another, rather than making any appeal to so-called statistics. The very great diversity of the cases with which we have to deal, and the almost insuperable difficulties in diagnosis, with its permanent uncertainty excepting in fatal cases, render the attempt to apply the statistical method not only difficult but seriously misleading. Above all, the method of compiling statistics by collecting the cases which have been published in journals is, I feel sure, certain to lead to error. The cases which find their way into print are, almost all of them, selected ones, and are published either to illustrate exceptional symptoms, or to record the result of critical operations. As regards operation cases, probably not a fifth of those which are unsuccessful find their way into type. There is also another element of very obvious fallacy in the attempt to make the statistics of one surgeon supply rules for practice to another. It is the difficulty, or almost impossibility, of securing that the cases cited shall be really of the same nature and suitably comparable one with another. Thus it is evident that an operator who should make it a rule to open the abdomen early in all cases of suspected obstruction, would secure a certain number of successful results; but it is at the same time clear that not a few of his cases would be of a kind which would probably have resulted in recovery in other hands without any operation at all. Statistics on this subject, to be of any value, should be of one of two kinds. Either they should consist of cases given in the

fullest detail, and concerning which all doubt is removed as to their being properly comparable; or they should be what we may call statistics *en grosse*, comprising all the cases occurring in the practice of an institution or an individual surgeon which could be counted as "abdominal obstruction." Respecting the latter, however, an important fallacy is to be noted at starting, that no definition can be given of what constitutes a case of "intestinal obstruction." I have tried to show that there is no group of symptoms which can be held to justify the diagnosis of "acute obstruction," and it is equally true that at the other end of the series there is no abrupt line of demarcation between a case of protracted obstipation and one of chronic obstruction. Keeping, then, these various sources of fallacy in mind, I believe we shall arrive at safer conclusions if we are content for the present to contrast individual cases, and to cite the impressions and opinions formed by men of observing habits and good memories, and who have enjoyed large opportunities of experience, than by attempting to construct statistical tables. I will, however, having made these remarks as to the relative value of the different kinds of evidence, mention a few facts which more or less approach the statistical character. In doing so, it may be convenient that I omit the mention of names. My first item of evidence is a list of cases supplied to me by a surgical friend, and including, I am assured, all the cases in which he has opened the abdomen for the relief of abdominal obstruction. The cases are eight in number, and may be briefly stated as follows :—

1. F., 56. Diagnostic laparotomy. Lumbar colotomy. Successful; patient died 6 or 7 weeks later.
2. F., 36. Diagnostic laparotomy. Gastro enterotomy. Recovery; lived one year.
3. M., 64. Diagnostic laparotomy. Right inguinal colotomy. Recovery; lived 9 months.
4. F., 56. Diagnostic laparotomy. Left lumbar colotomy. Death from operation.
5. M., 4. Intussusception. Laparotomy. Recovery.
6. M., 26. Acute volvulus. Laparotomy. Recovery.
7. M., 6. Ruptured vermiform appendix. Laparotomy. Resection of appendix. Death.
8. F., 26. As the preceding. Death.

It will be seen that in this list we have five recoveries and only three deaths, and these results may at first sight be considered as distinctly encouraging for the performance of what we may call diagnostic laparotomy. It will be seen, however, that cases one, three, and four finally resulted in colotomy, and that thus, excepting as an aid to diagnosis, the abdominal section was of no avail, and it might possibly have been better in all these to have performed colotomy in the first instance. Since, however, two out of three survived the double operation, these cases may be held to prove something as regards the but slight risk, in certain cases in adults, from abdominal exploration. In case five, a child recovered after a laparotomy for intussusception. This case illustrates a rule of practice about which probably there can now be no dispute, that in cases of intussusception, recognized as such, and irreducible by other means, the abdomen ought forthwith to be opened. Case six is an instance of recovery after "acute volvulus," and therefore apparently an instance of a life saved by the procedure adopted. I believe, however, that even after the operation had been performed it remained somewhat doubtful whether a volvulus existed, and that no recognized reduction from such a state of things took place. The case, therefore, is precisely one of the class upon the existence and frequency of which I have tried to insist, in which abdominal taxis without abdominal section might have been successful. The last two cases need no comment. The operation simply failed to save patients whose cases were probably hopeless under any treatment.

It is a very important question as to how much danger the operation in itself involves. To judge from the expressions used by some recent writers, we might suppose that they held that it does not involve any, and that the abdomen may be opened and the bowels handled without any risk whatever in the procedure *per se*. Such a proposition can, however, scarcely be maintained if a little thought be given either to probabilities or to the results of experience. Without a doubt, the subjects of laparatomy for obstruction, even when the procedure has been most satisfactory, have a remarkable proneness to die. In not a few cases, the cause of death is

to some extent inexplicable. A band may have been divided and the bowel completely liberated, and all may seem most hopeful, but suddenly and unexpectedly, within a few hours, collapse sets in and the death quickly follows. I cannot help a suspicion that what is called "abdominal shock" is in these cases something very different from what we now know it to be in such operations as ovariotomy.

The danger of the operation is probably greater in very young subjects than in older ones. Thus the recoveries after the relief by operation of invaginations in infants have been exceedingly few. The chance of survival increases, as in the case of tracheotomy for croup, with each year of advancing life.

It may be freely granted that the danger attaching to the operation differs with the stage of the case, and that it is much less in the early stages than the later ones. One reason for this is that in the early stages it is generally possible to complete the procedures much more quickly than it is when tympanitis has been developed. With an undistended abdomen, it is both more easy to find the seat of obstruction and to keep the bowels in the cavity, or return them after their escape. When there is tympanitis, escape is almost certain to occur, and return will be difficult. One operator has indeed advocated in such cases the practice of incising the bowel, emptying it of its contents, and then stitching up the wound.

It is obvious that an operation of which such a procedure is a part has risks of its own. We must seek, then, to estimate the operation-danger in relation with different groups of cases and conditions of the patient; but it is, I would submit, a reality, and a not unimportant one in all. It is not at all a safe conclusion that all the cases which have died after it, would necessarily have died without it. Yet this, or something very near it, is, I think, the tone of argument of many who have written upon the question.

It may be a question, too, as to whether modern improvements have done much to diminish the risk of laparotomy and whether further improvements may be expected to accomplish more. Any one writing some years ago might reasonably have claimed that the use of antiseptic sprays

and solutions had rendered the risk of abdominal operations far less than formerly, and had pretty much put an end to peritonitis. No one, however, can to-day make such a supposition, for some of our most successful operators entirely discard these precautions. It may, however, still be the fact that the liberal use of water, more or less medicated, which is now a part of general practice, is a decided gain. We may instance also as improvements, which are likely to yet further advance, the careful avoidance of much handling of the bowel, and the adoption of better rules of search for the cause of obstruction. One authority advises that this should be done chiefly by quickly observing the state of bowels which present themselves in the wound, and noticing which coil is congested and distended. In this way he thinks that the operator may almost always come down on the seat of impediment at once, and that he will very rarely be reduced to the old expedient of passing the bowels through his fingers, foot by foot. Of this latter plan, he remarks to the effect that it is certain to find the stricture, "but in doing so it kills the patient." Yet it is precisely what most have hitherto done.

In partial justification of some of the remarks which I have made above I will now produce a rough list of all the cases of laparotomy which have occurred during a given period at a hospital, the records of which have been carefully kept. At this hospital the greatest possible attention has been paid to all modern improvements. For the most part, but not invariably, antiseptics have been sedulously used. The cases, as will be seen, are taken without selection, and are of extremely various character. The list includes, so far as I know, all in which the abdomen was opened, either for peritonitis or obstruction.

A second list of cases will also follow of a somewhat different character, since it comprises not only operation cases but all cases of obstruction which came under care. These two lists have been compiled for me from the published statistical reports of two different hospitals. As they are not done by myself, I may state they are by a surgeon whose bias is distinctly in favour of early operations.

List of Laparotomy Operations for Intestinal Obstruction or simulating conditions at —— Hospital during the years 1878 *to* 1887. (*Collated from the Hospital Registrars' Reports.*)

1878. 1. M.; aged 23. Volvulus of cæcum? Died.

1879. No cases.

1880. 2. F.; aged 5 months. Intussusception. Operation done late, after enemata, &c., had been fully tried. Died.

3. M.; aged 6. Obstruction by band. Operation not done until late. Died.

1881. No cases.

1882. 4. M.; aged 45. Stricture of descending colon. Resection after abdominal section. Died.

5. M.; aged 19. Perforating tubercular ulcer with peritonitis. Died.

1883. 6. M.; aged 27. Strangulation by Meckel's diverticulum. Had been vomiting one week. Vomit stercoraceous. Gut found almost gangrenous. Died two hours after operation.

1884. One case. This case ought hardly to be counted, since the patient was in a very collapsed condition, and died a few hours after admission. No post-mortem was allowed, so that the nature of the obstruction remained obscure.

1885. 7. M.; aged 28. Acute general peritonitis; cause obscure, *symptoms of only one day*. Died a few hours after operation. Caseous masses in mesentery.

8. M.; aged 6 months. Intussusception. *Symptoms two days.* Abdomen opened after "taxis" and air-injections had failed. Intussusception drawn out. Died five hours after operation.

9. M.; aged 23. Acute peritonitis due to perforation of vermiform appendix. *Symptoms, vomiting, &c., for three days.* Artificial anus made. Died.

10. F.; aged 35. Enteritis and intussusception? *Symptoms for several days.* Abdominal section. Intussusception in jejunum said to be drawn out. Post-mortem: acute hæmorrhagic enteritis.

11. F.; aged 26. *Symptoms for five days.* Strangulation by band from Meckel's diverticulum. *Operation lasted twenty minutes only.* Great relief for twenty-four hours; then sudden death from unknown cause. No post-mortem.

12. F.; aged 33. Obstruction from bands left after tapping a parovarian cyst. *Symptoms only a few hours.* Two bands ligatured and divided. Died.

1886. 13. An infant aged 6 months, with acute intussusception. *Symptoms only a few hours.* After failure of oil-injection the abdomen was opened, and an intussusception of ileum and cæcum reduced. Death a few hours later from acute peritonitis and mesenteric hæmorrhage.

1887. 14. M.; aged 28. Intense pain in abdomen, vomiting, *constipation for four days*, history of *similar attack three years ago.* Under anæsthetic sausage-shaped humour felt to extend from R. hypogastric

to R. iliac region. Abdominal section, humour found to be a distended and inflamed gall-bladder. No calculus detected. Wound sewn up, nutrient enemata, morphia. *Rapid recovery*, with relief of symptoms.

15. M.; aged 63. Admitted with acute intestinal obstruction. Operated on at once. Band found and released. Patient did not rally. Acute peritonitis at post-mortem. Strangulation relieved.

16. M.; aged 45. Admitted in collapse with severe pain about umbilicus. Abdominal section, perforation of intestine found to have occurred. Death in a few hours.

17. M.; aged 40. Abdominal pain and vomiting for two days. Collapse. Abdominal section. Acute peritonitis with extravasation found. Patient lived four days. Ulcer of cæcum found post-mortem.

List of Cases of Intestinal Obstruction treated in —— Hospital during the years 1872 *to* 1883. (*Collated from the Hospital Registrars' Reports.*)

1872. There were three deaths from intestinal obstruction; one was a case of obturator hernia, another intussusception, but no details are given. They seem to have been all the cases of intestinal obstruction that year.

1873. There was one case of intestinal obstruction. The patient had *stercoraceous vomiting, but recovered after succussion and enemata*. The Registrar suggests that it was obturator hernia.

Another case of intussusception in a child of 6 months (ileo-cæcal). Died on the third day; inflation had been attempted.

On the medical side one case of obstruction was admitted in a dying condition.

1874. There were no cases, nor any in 1875.

1876. F.; aged 47. Reducible hernia for fourteen years; complete obstruction for four days, hernia again reduced, collapse, vomiting. Abdominal section. A gush of pus occurred whilst examining towards pelvis with finger, intestine felt to be bound down in pelvis; abdomen syringed out, wound closed, recovery.

M.; aged 23. Obstruction *six days*, vomiting *three days*. Death. Post mortem: double volvulus of jejunum with band in addition.

M.; aged 9. Obstruction (of sudden onset) for four days. Collapse and death. Post-mortem: perforation of vermiform appendix from concretion; abscess in iliac form.

1877. Intussusception in infant of 8 months; ileo-cæcal valve protruded through anus. After inflation and oil enemata had failed, the abdomen was opened. Peritonitis. Death. The intussusception was reduced, and death appeared to be due partly to shock and partly to peritonitis.

There were also four cases of obstruction (all females) treated with success on the medical side—probably fæcal impaction.

1878. M.; aged 41. Relieved by enemata.

M.; aged 34. Enteritis, peritonitis, death. This seems from the post-

mortem to have been a case of volvulus of the ileum, the enteritis and peritonitis being secondary.

F.; aged 43. Stercoraceous vomiting, and great depression. Recovered after "shaking."

There was also a case of "fæcal accumulation" which died of acute enteritis and pyelitis, on the medical side.

1879. The only case was one of intussusception in an infant aged 6 months (of transverse and descending colon) cured by injection of air and water.

1880. F.; aged 35. Complete obstruction for seven days. No previous history of digestive trouble. Treatment by enemata. Death from septic peritonitis (patient abated whilst in hospital). Post-mortem: cancer of sigmoid flexure.

M.; aged 62. Reducible R. inguinal hernia for ten years. *Symptoms of moderate obstruction for five days*—onset with acute pain. Dulness in flanks. R. inguinal canal was laid open at lower part, but not even a sac found. With enemata the patient recovered, the dulness disappearing. (Probably fæcal impaction.)

F.; aged 61. Abdominal pain and occasional sickness for two months. Complete obstruction for seven days. Enemata, no result. Post-mortem: perforation of cæcum, peritonitis, cancer of upper part of rectum.

F.; aged 50. *Symptoms acute, of five days' duration.* Blood in vomit. *Abdominal section.* Nothing found but commencing peritonitis. Death fifteen hours later. Post-mortem: recent peritonitis, gall-stone (1″ diam.) blocking small intestine; acute enteritis of the part above.

On the medical side there were three cases of fæcal impaction relieved, and one doubtful one that died.

1881. There was only one case of intestinal obstruction (on the medical side), and there is no note except that it recovered.

1882. There were no cases on either medical or surgical side.

1883. F.; aged 4 months. Intussusception commencing at ileo-cæcal valve; characteristic symptoms for twenty-five hours; tumour readily felt. Under inversion and repeated injections of air or water apparent reduction was several times effected, but the child died fifty-two hours after admission (*i.e.*, on the fourth day after the onset of symptoms). A partly irreducible intussusception was found (invaginated part gangrenous).

The two lists of cases which I have given above have the essential difference that the one comprises all the operations for exploration of the abdomen performed during a certain period without mentioning the cases of obstruction which were treated without operation. The second list comprises all the cases of abdominal obstruction, whether acute or chronic, which came under care during the years which are mentioned. It includes, of course, all cases in which the

abdomen was explored by operation, together with many others. The lists are, as will be easily seen, not from the practice of the same hospital. I am not responsible for their accuracy any further than this, that they have been carefully collated for me from the reports drawn up by the registrars of the hospitals concerned. They must not for a moment be taken as statistical. They are simply rough lists, imperfect in many items of detail, and far too briefly put to permit of any accurate comparison of individual cases. They appear to me, however, to have some value as being likely to convey to a careful and candid reader an impression as to the present position of this branch of abdominal surgery, at least as truthful as that given by some of the more elaborate statistical statements which are to be found in some recent works. I shall not permit myself to regard them as statistics even to the extent of attempting to construct any synopsis of their facts. Those interested in the subject must read carefully for themselves and form their own impressions on them. That they do not present a very cheering picture of the practice of exploratory laparotomy is undeniable, for although several patients recovered after it, in not more than one or two could it be thought to have exercised a decidedly helpful influence. In one (a case of abscess) it was probably the means of saving the patient's life. It curiously happens that several of the cases of recovery were anomalous ones so far as the operation was concerned, and this is a fact which I have noted in not a few other successful cases recorded by different surgeons. The conditions found at the operation did not conclusively prove any mechanical obstruction, and thus it could not be said that any definite object was served by its performance. In one of these, all that was found, where intussusception had been suspected, was a much distended gall-bladder. It is, of course, both possible and probable that this condition would have relieved itself without laparotomy.

The advocates of early operative exploration will find in these lists plenty of opportunity for repetition of the suggestion, so often and properly made, that the treatment came too late. But side by side with these there are others in

which it was resorted to very promptly. The advocates of abdominal taxis and of abstinence from laparotomy, excepting when a tolerably confident diagnosis can be formed, have, I think, a fair right to claim that the general lesson to be derived from these lists is in favour of their opinions. The first list comprises several in which the early employment of abdominal taxis might have been successful; and the second, several in which it was so. A few of the latter were in really urgent conditions. Let me here insist, as I have often done before, that those who advocate anæsthetics and abdominal taxis in preference to early exploratory operations, have an equal right with their opponents to plead that the majority of cases which come under their notice come too late. It is most freely to be admitted that the conditions found in not a few cases mentioned in these tables were such as could not possibly have been made better, and might have been made decidedly worse, by the employment of any form of abdominal manipulation. If, however, in the earliest stage of all of them an anæsthetic had been given, and under its influence a careful and systematic examination of the abdomen made, with energetic attempts at taxis if thought desirable, I do not believe that any of the cases would have been materially hurt; I think it probable that many would have been cured, and that in others the diagnosis would have been much assisted. It is for the early use of anæsthetics in all cases, and abdominal taxis only in appropriate ones, that I plead.

Any one who reads these lists of cases attentively cannot fail to be instructively impressed with the difficulties of diagnosis, in many cases almost insuperable, which they present. He will see that the most skilful surgeons, with all the advantages for consultation which hospital practice affords, may still find it impossible to discriminate between peritonitis, ruptured intestine, plugging from gall-stone, malignant stricture, and many other conditions. He will have to observe further that it is even quite possible for the diagnosis to remain in doubt after the operation.

The late Mr. Callender, in recording a case of death from obstruction caused by a twist (as proved at the autopsy), writes,

"I was glad not to have attempted the operation during the life of the patient, for it would have been impracticable." He adds, respecting another case in which internal strangulation through a hole in the mesentery had caused death, "In this case also gastrotomy would have failed in relieving the stricture, which was effected with difficulty even at the post-mortem."

In the St. Bartholomew's Hospital Reports for 1881, Dr. David A. King reports two cases, one in order to illustrate "the difficulty in deciding the question of operative interference in cases of intestinal obstruction;" and the other "the eminent success attending the expectant treatment of some cases." In the first of these an operation was performed, and a band found and divided, but it was done too late, and sloughing had already occurred, so that perforation took place during the manipulations. The portion of intestine under the band was exceedingly small. The patient never rallied from the operation, and died a few hours after its conclusion. In describing minutely the conditions of the constriction, Dr. King argues that there was nothing which rendered spontaneous reduction at all improbable. He distinctly states that no loop of intestine was involved. His second case is a very instructive one, for a surgical consultation had taken place on it, and an unanimous opinion in favour of an immediate operation had been given. This was on the fifth day of an obstruction of sudden onset, with pain and vomiting. The physician whose patient the man was, in opposition to the advice of his surgical colleagues, decided to wait a little longer, and the result was that the man made an excellent recovery without operation. The treatment was by opium and the use of copious enemata. Dr. King argues that it was quite impossible to make any more probable diagnosis than that the obstruction was due to a band, remarking, I think with great reason, that it is a purely gratuitous assumption that cases of band-strangulation are always fatal.

One other remark that remains to be made in connection with the lists just given is this, that in a very considerable number of fatal cases (whether after or without the exploratory operation), a colotomy was really the measure which was indicated.

I feel sure that a far more liberal resort to this operation, and its performance at earlier stages than has been done in the past, is much to be desired. Case after case might be selected from the above lists in which in all probability the patient's life would have been saved had this operation been done. Nor is it necessary, as some operators appear to think, to perform an abdominal exploration in doubtful cases in order to ascertain whether a colotomy is indicated. It is surely better in these cases to reverse the order of procedure and do the abdominal exploration only if the colotomy is found impracticable. By the anterior or inguinal operation the two may indeed be combined. I do not wish, however, to advocate this latter procedure, and should prefer, so far as my own experience has gone, to attempt a lumbar colotomy in the first instance. In cases in which the position of the obstruction is doubtful, the right loin is to be taken rather than the left as increasing the chance of success.*

With these remarks I will, for the present, leave the consideration of statistical statements, and will return, in my next number, to the examination of certain special parts of the subject.

(*To be continued.*)

* The Bradshawe Lecture at the College of Surgeons, in December last, was devoted to the consideration of the relative advantages of lumbar and inguinal colotomy. The lecturer, Mr. Bryant, produced a large and most interesting array of clinical evidence in favour of the older operation, and proved also that its risks are but very small if it be not delayed too long. The chief advantage which he admitted as belonging to the inguinal method was the opportunity offered for exploration. A similar expression of strong preference fell from Mr. Durham in a public discussion on the subject in 1887. Both Mr. Bryant and Mr. Durham have, as is well known, long been zealous advocates for early colotomy.

SYPHILIS.

No. VII.—*Syphilis in a pregnant woman. Infection of the fœtus. Some facts as to transmission.*

Dr. C—— had a midwifery chancre on his finger. The sore was noticed on November 1, 1882, and there was a swelling in the armpit. A general eruption came out in the Christmas week. On January 16th he came to me. The sore had been "an eczematous fissure," and had never been suspected until the rash came. He believed that his wife was a month pregnant when he contracted the disease, and he had at once abstained from intercourse when he found what was the matter with his finger. His wife, however, observed a plentiful eruption in the fourth or fifth month of pregnancy. She was confined, apparently at full time, on July 15th. No primary sore was ever recognized in her. It will be seen that two hypotheses as regards the wife and child are possible. The child may have been begot late in November when the disease was incubating in the father, and may have communicated the taint to its mother (fœtal contamination), or the mother may have contracted a vaginal sore from her husband in December, when she was two months pregnant, and have thus infected her child. The former seems the more probable.

Both father and mother were treated, and got well. Neither of them suffered much, and when I saw them again in 1888 (five years later) both were free from reminders and seemed quite well.

The child, a little girl now nearly five years old, had suffered severely. In infancy she had rash and snuffles and

severe attacks of convulsions. After the convulsions she squinted, and seemed to have very defective sight.

She is now (1889) of puny growth, and decidedly below her age in intellect. Her anterior fontanelle is not yet closed. It is depressed considerably below the level of the bones, and the pulsation of the brain can be distinctly felt (nearly five). Her eyes converge, and both external recti appear to be weak. Sometimes when she is not giving attention they are straight, but the moment that she is excited the squint comes back. There are slight but decided thickenings in front of both tibiæ. Her upper incisor teeth (milk) are rotting through at their necks. Her tongue is red and somewhat bald. In both eyes there are extensive evidences of choroiditis, chiefly in the form of minute yellowish white dots, ill-defined and without pigment, but there are also numerous small pigment deposits in the retina. In the right a wide rim of pigment surrounds the disc, which is otherwise normal; whilst in the left the disc is curiously misshapen and its edges blurred (probably by old neuritis). In this eye there is a single, very dense, almost globular opacity in the vitreous. As she will not answer any questions, it is very difficult to tell what she can see. Probably retinitis pigmentosa with partial idiotcy will follow.

After the birth of this child, Mrs. C—— had a miscarriage at a very early period, and three years later a child was born at full time, which lived, and is now a year old and quite well. This child in infancy had snuffles and some doubtful soreness at the anus, for which mercury was used. It soon recovered.

No. VIII.—*On the Classification of Syphilitic Skin Phenomena.*

The first and by far the most important classification of syphilitic diseases of the skin would, in my opinion, divide them into the exanthems and the lupoid affections. The distinction between the two is that the former are symmetrically arranged, of the nature of rashes or eruptions, temporary in duration, and for the most part prone

to disappear, if not spontaneously, at any rate very readily under treatment. The lupoid affections, on the other hand, are not usually symmetrical and are often definitely local, more or less resemble common lupus in character, and always tend to get worse unless definitely and efficiently treated. The one class belongs to the secondary period of syphilis and the other to the tertiary, and it is amongst the rarest events in the history of that disease to see them in any way reverse their positions. It is not by any means so rare to see a secondary eruption gradually slide into a tertiary one; a symmetrical tubercular, or bullous exanthem, into a much less symmetrical lupoid disease. Thus rupia, which is always symmetrical at first, and always occurs comparatively early in the course of syphilis, may easily slide into rupia-lupus. The longer it lasts, the more certainly will it lose the features of rupia and assume those of lupus.

The classification of the different forms of secondary eruptions of syphilis into erythematous, papular, scaly, bullous, etc., although of much interest, is, it seems to me, of very minor importance to that given above. They imply little or nothing as regards the stage of the disease, not much as regards its severity, and, as is well known, the several features of difference which have been named are often met with in one and the same patient.

No. IX.—*Elephantiasis of the Scrotum in remote association with Syphilitic Lupus.*

A very remarkable example of elephantiasis of the scrotum in a patient who had never left England, and in connection in the first instance with tertiary syphilitic inflammation, came under my notice in February of 1887. The patient was an old gentleman of 76. He was in good health, though greatly inconvenienced by the huge mass he had to carry about with him. His scrotum was as large as two adult heads, and measured about 36 inches in circumference. It was in a condition partly of elephantoid hypertrophy and partly of solid œdema. The hypertrophy was strictly confined to the scrotum, and did not involve the thighs or

the pubes in the least. Nor was the skin of the penis or prepuce materially thickened, though the penis itself was almost buried in the mass. It was possible that part of the bulk might be due to hydrocele, but the great thickening of the overlying skin prevented any accurate diagnosis. Exploratory punctures had been made before I saw the case, but without result. It was said to have been twenty years in process of enlargement, but had increased more rapidly of late. The connection of the disease with syphilis in the first instance was made probable by the presence of some deep scars at the root of the penis. These had been left by tertiary ulcerations, and there were many others on different parts of his body. More particularly the whole of one buttock was in a condition of irregular scar consequent upon lupoid ulceration. The date of the primary syphilis was upwards of forty years ago, and the syphilitic lupus had been cured twenty years ago. During these last twenty years he had enjoyed excellent health, his only trouble being a gradual increase in the size of his scrotum; the latter had no doubt taken its origin in the œdematous inflammation which had been produced by the lupoid ulcers at the root of the penis. This solid œdema had never disappeared, owing to the pendulous position of the parts implicated. In this we see an ordinary exemplification of the laws which influence the production of elephantiasis. Although the disease began in connection with a syphilitic inflammation, its further development had had no special association with syphilis. The case may indeed be cited as a good example of permanent recovery after very severe tertiary disease of the skin, for the patient, now aged 76, was florid and in excellent preservation, looking much younger than his years.

No. X.—*Syphilitic Elephantiasis of Scrotum and Penis in connection with Syphilis.*

Mr. Dobson, at the General Hospital, Bristol, showed me a very interesting case bearing upon the production of elephantiasis of the scrotum in connection with syphilis. The patient, a young and healthy man, had suffered from syphilis

about five years previously, and had been for the last eighteen months or more the subject of a chronic ulceration which had entirely destroyed his prepuce. This ulceration was attended by considerable growth at its edges, and some thick little bossy masses were seen near the edges of the ulcer. It extended from the destroyed prepuce on to the skin of the penis, and a little upon his scrotum. The point which most interested me in reference to elephantiasis was, that the whole ulcer was becoming thickened and tuberculated. The condition was indeed precisely that of an early stage of elephantiasis, and it was undoubtedly due to the proximity of long persisting syphilitic inflammation. The condition of the ulcer might easily have been mistaken for epithelial cancer from its thickened and warty edges. It closely reminded me of what was present in Mr. J——'s case. In this latter the difficulty of diagnosis was such that I cut away portions for microscopic examination, and also obtained the advantage of a consultation with Sir James Paget before venturing either to excise the part or to rely on specific treatment. The microscope gave negative results, and a course of mercury entirely cured the disease. Mr. J—— was a gentleman of about fifty-four, who had suffered from syphilis many years before I saw him, and who had also had specifics used, as he said, without result, just before his coming to me.

No. XI.—*Interstitial Keratitis, affecting one eye only. Teeth not affected.*

A gentleman, aged 27, a solicitor, came to me on account of interstitial keratitis in one of his own eyes. He was well aware that it implied inherited syphilis, and told me that his father admitted having had syphilis four or five years before his marriage but said that he had been, at the time of that event, for three years quite well. The facts which were given me led me to doubt much whether this history had anything to do with the son's keratitis. The father's marriage took place in 1849, and my patient was not born until 1862, whereas several brothers and sisters had been born previously who had all remained perfectly healthy. The medical man

who attended at my patient's birth was still living and remembered all the facts. He had treated him in infancy for a syphilitic eruption. He had also treated his father a year before the child's birth for a severe attack of double iritis, and some years after his birth his mother suffered from a tertiary ulceration on one knee. Putting these facts together, it seems almost certain that the father contracted syphilis anew during his married life, and that his double iritis was probably secondary. His wife's gumma on the knee might possibly have been due to syphilis by conception. With the history above given, there could not be the slightest doubt that my patient was the subject of inherited syphilis, and this being established it is of interest to note that the keratitis, which had existed six months when I saw him, was still of one eye only; that his teeth were of perfectly good form, his nose remarkably high and narrow, and that with the exception of some deep lines about the mouth there was nothing to denote the supposition of inherited taint.

DISEASES OF THE SKIN.

No. XII.—*Pustular Sycosis of the whole body in a young man.*

One of the most deplorable cases of general sycosis which I have ever seen, occurred in the person of a young man named S——, who came to me from Manchester in June, 1889. Both whiskers were affected, his beard, both eyebrows, the whole scalp, the axillæ and the pubes. There were indeed pustules over his whole body and everywhere in connection with the hairs. There was a certain admixture of eczematous inflammation, but in the main the disease was restricted to hair follicles. He had a number of dark copper-tinted stains scattered over the chest and trunk, which represented some former eruption, the precise nature of which I could not quite ascertain. Although only 22, he had been a year married, and he had never had any venereal disease. In early boyhood he had been long troubled by an eruption on his scalp, probably eczema. Of this he thought he had got quite well, and had remained so until the present outbreak, which began nine months ago.

The conditions of the eruption in different parts on the present occasion were not quite the same in different parts. On the whiskers, chin, pubes, and eyebrows it was the common type of pustular sycosis; the hairs were in part destroyed, and many of those remaining were embedded in pustules. On the scalp, however, the condition was much less acutely inflammatory, and all the hairs were matted together in a thick, dry scaly crust like that of severe pityriasis or seborrhœa. The young man had already had much careful treatment by different medical men, and had recently been under the care of a distinguished specialist who had sent

him to the sea and used ichthyol, &c. What to do for him was the question. I represented to him the gravity of his disease, and advised his wife and himself to devote their whole attention to its cure. My prescription was a tar wash and an ointment containing tar and mercury, and these were to be used constantly, the patient remaining in bed, and epilation being practised on the largest possible scale. I have no doubt that we had to deal with an example of self-contagion in part local and in part through the circulating fluids. The acuteness and severity of the process was probably conditioned by the youth of the patient. He was of dark complexion and sallow, but not specially feeble. The disease had, he said, at one time reduced his strength so that he could scarcely stand.

No. XIII.—*Cases of Severe Sycosis of Pubes.*

A very good example of pustular sycosis of the pubes came under my observation in the person of a gentleman named G——. He asserted that the eruption had been present not more than a month, but he had certainly had some eczematous irritation at the root of the penis for a much longer period. I had treated him for eczema some four or five years ago. I had then seen him on only one occasion, and his assertion was that he had been quite cured. When he came to me in April, 1889, he had no disease of his skin excepting in the pubic region. The whole of this part was covered with pustules, almost all of which were in association with the roots of the hairs. I pulled out many hairs, all of which brought with them the sheath adherent and infiltrated with pus. Close to the root of the penis there was some scaly desquamation as if from eczema, and this he admitted he had been in the habit of scratching severely. The sycosis had developed very rapidly and was clearly, I think, spreading by contagion. A few of the large hairs on his abdomen, nearly as high as his umbilicus, were affected.

I saw some years ago a case very similar to the above in which a lady was the subject of the disease. It was of long duration and very severe, almost the whole of the pubic hairs

had been destroyed and a condition produced closely resembling that of advanced sycosis of the whiskers.

It may be remarked in connection with cases such as the above, that it is well worth the patient's while to submit to very systematic treatment in the early part of the case. The cure must be by local means, and these must be most sedulously employed. Internal remedies are of little or no use, nor is it much better to rely upon the patient's chance employment of a lotion or an ointment, whilst he is allowed to follow his ordinary occupations. The treatment to be really efficient should be conducted in bed. A careful and complete epilation should be the first step, and after that the use of lotions or ointments calculated to suppress the cell formation. Of these I believe none will be found more convenient or effectual than a strong lead and spirit lotion, to which a little tar is added. Mercurial ointments are, however, very useful. In cases in which the patient cannot give up his occupation, he must be instructed to use the remedies as carefully as possible during the evening and night; but his cure will be much more protracted and far less certain, than if he will submit to treatment in bed.

Although sycosis and ophthalmia tarsi are diseases of which the pathology is the same, and which differ chiefly as to the part affected, it is certainly rare to find them present together. I have, however, seen several such.

A young man was sent to me from Saffron Walden in May, 1868, who had them both in a severe form. All the hair follicles of both lids of the right eye were inflamed, and his chin and upper lip were covered with the pustules of sycosis, with some eczematous inflammation of the surface.

No. XIV.—*Two cases of an undescribed Skin Disease ("Vitiligo").*

The two cases which I have to narrate appear to be exactly alike. At the same time they present features of difference from all which I can myself remember either to have seen or to have found recorded by others. In all probability the old term Vitiligo, which has now passed out of use, included first and chiefly cases of leucoderma, and secondly and more

rarely cases of localized morphœa, the "ivory patch" form. Apart, however, from both these, I remember to have seen in my early studentship at Blackfriars two or more cases to which Mr. Startin gave the name of Vitiligo, which I think closely approached those which I now record. The spots were placed on the shoulders, and were peculiar from their silvery whiteness and smoothness. The fallacy which has suggested itself to my mind in later years is they may after all have been nothing more than the scars of very abundant acne. Severe acne, and especially that form of pruriginous acne which I have described as the acne of adolescents ("Pennman's disease"), does leave the shoulders covered with silvery scars. This was the state in which Pennman's shoulders were left on his recovery. I have often had difficulty in convincing my friends that silvery spots which I believed to be of this origin were really so. To the cases now to be related no such fallacy can attach. The patches were grouped on the limbs, where acne does not occur, and they were certainly in the first instance not scars, but slightly thickened patches to which a certain small amount of epidermis adhered. I will, however, leave the cases to tell their own story, only premising that I shall be much indebted to any reader who can direct my attention to similar ones They are from notes taken many years ago.

Case 1.—*A symmetrical Eruption of grouped spots of silvery whiteness and almost smooth; Limbs and trunk affected; of seven years' duration, and unattended by irritation.*

L—— A——, aged 49, living at 156, Broad Walk, Southwark, a married shoemaker, sent from H.S.D., May 26. His eruption consisted of symmetrical groups of spots which were white and almost silvery in aspect, very slightly scaly, and some of them a little raised. The scale crust, where present, adhered firmly, and after it was scratched off, the spot was whiter and more glistening than before. The arrangement was in long oval patches like those of herpes. It occurred on both hips between trochanter and crest of ilium, curving round and downward to front of thigh. Also over the upper thirds of ulnæ (not on tip of elbow), in the middle of lower

third of sternum, and on inner side of right knee just below the joint. On the arms the patches were less silvery, more of a dirty brownish tint than on the legs. Everywhere it seemed to leave thin white scars. He had some lichen marginatum on chest and back. The pearly look of the patches was one of their chief peculiarities.

History.—It began seven years ago behind the elbows, and was observed next on the chest. It has never given any special trouble. It neither itches nor tingles.

He is thin and rather pale, but says that he was never seriously ill. Some pain between shoulders from dyspepsia. He does not know of skin diseases in his family.

Case 2.—*A symmetrical Eruption of pearly white spots; More than twenty years' duration.*

Mrs. M——, aged 40.

I transcribe the following notes exactly as they were written on the patient's hospital paper. The first half are by Mr. Waren Tay.

"The case appears to be an example of an unusual form of Morphœa. Scattered over the limbs and trunk are numerous smooth patches of milk-white colour. These are glossy, but only very slightly thickened. On the right neck, over the clavicle, there is a large group of them, where they become confluent and much resemble the lardaceous stage of Addison's Keloid. The skin is a little tight, but is scarcely thickened. On the opposite side of the neck there are only a few discrete spots, from the size of peas to that of a fourpenny-piece. We did not examine the rest of the surface, but she states that on the body many of the patches become brown. On the legs as on the arms there are scattered white spots."

(A daughter is the subject of some skin disease, and attended at this hospital Nov. 17, 1874. No. 21,401.)

The following notes are my own writing: "The pearly smoothness and small size of these spots distinguishes them at once from those of leucoderma, with which indeed the eruption has no great similarity. The woman states that the spots on the arms show more when the skin is dirty, as the spots do not take the dirt. At present they are scarcely visible.

She states that the spots first showed themselves when she was 14. They never gave her any trouble, and never itched in the least. Before her marriage she consulted a medical man, but he told her that she need not mind them. She thinks they have not materially changed for many years. I have seen similar white spots in several other cases, and I think usually in association with Morphœa. The case appears to differ from the more common forms of Morphœa in that there is no tendency to progress to the brown stage, in that there is very little thickening or induration of the skin. It begins as a white spot and continues as such." From Morphœa, however, the cases differ in their very prolonged duration without change, and also in their symmetry.

No. XV.—*Second attack, after a long interval, of an Eruption in a healthy young man, somewhat resembling Erythema Nodosum, but generalized. Prolonged duration in spite of treatment. High temperatures and emaciation. Final recovery apparently without reference to treatment.*

Some years ago I went to the Dreadnought Hospital, on the invitation of the late Dr. Carrington, to see a case of great interest. The much to be lamented death of Dr. Carrington, in the next year, prevented his intended publication of its facts. Although I possess only memoranda which were taken solely for my private use, yet they may serve, together with some letters from Dr. Penny, to give a fair notion of the peculiar features of a disease which was then to me unique and is still of extreme rarity. I may add that the patient was seen at the same time by Dr. Pye Smith and other physicians, and that Dr. Carrington took great interest in him, and did his best to collect information which might aid in the diagnosis. No one was, I believe, ever able to suggest as a diagnosis any name in recognized use. For a time it appeared not unlikely that the disease might end fatally, and its subject was for long confined to bed. The patient, a young Swedish sailor, was emaciated and very pale. He had been in the hospital some weeks when I saw him, suffering from an erup-

tion which looked like a cross between urticaria and erythema nodosum. He said that it had begun whilst he was at sea, and that his first symptoms had been aching in his knees. He believed that he had had a similar attack about two years ago, on which occasion he was for several weeks in a colonial hospital. The eruption during the time that he had been in the Dreadnought had been attended by high temperatures, failure of strength, and emaciation. It had been characterized by the appearance of large erythematous patches, which had come out over all parts of the face, limbs, and trunk. Some of them were considerably raised, none had vesicated; they had varied much in place, from time to time, some fading away and then new ones appearing. When I saw him the wheals were not characteristic of urticaria, many of them being more raised at their centres than at their margins. There was one large one on the side of his face which appeared to be almost half an inch in thickness in the middle. In the character of its edge, which was ill-defined, and in general appearance it looked just like a huge lump of erythema nodosum.

Having regard to the fact that the man had had a previous attack, and that on each occasion the eruption had commenced when he thought himself in good health, and that it had been attended by great emaciation and debility, it occurred to me that it might possibly be a sort of pemphigus without bullœ. We had exhausted all directions of inquiry in reference to diet and climatic influence, and could find no light on the case. I suggested that arsenic should be tried on the pemphigus hypothesis, and found that it had already been begun that morning. A few days later I had the pleasure of receiving the appended note from Dr. Penny, then the resident medical officer of the Hospital:

"Seamen's Hospital Society (late *Dreadnought*), Greenwich, S.E.,
"*May* 28, 1883.

"Dear Sir,—You will be interested to hear that our patient here has wonderfully improved. He commenced taking arsenic (Liq. Arsenicalis m. iii. t.d.) on the morning of the 23rd (the day you were here); that evening the temperature was 100°—the same as the morning (without the previous constant evening rise). The next morning (24th) it had fallen to normal, and there it has since remained. No fresh 'lumps' have appeared, and those previously present have

rapidly died away, and are now almost gone. The patient *generally* has much improved, and is sitting up this afternoon.

"I thought you would like to know of this change, which certainly looks very like an effect of the arsenic. I should say that on the 25th I increased the dose to m. v. Should anything further occur of interest, I will let you know.

"Yours truly,

"J. Hutchinson, Esq." "Edw. Penny.

"Seamen's Hospital Society (late *Dreadnought*), Greenwich, S.E.,

"*June* 25, 1883.

"Dear Sir,—I hoped that my last letter to you would have closed our correspondence on the subject of our patient here, but for the last fortnight he has had a relapse, just like his previous attack, and in spite of Liq. Arsenicalis m. ix. t.d. The spots are now less large than formerly, and are in many cases distinctly in the form of raised red rings spreading at the margins.

"There is no doubt that the medicine is correctly dispensed.

"I am, yours very truly,

"Edw. Penny."

Six months later I wrote to Dr. Penny to ask for further information as to the man's progress, and received the following letter:

"Seamen's Hospital, S.E.

"*Dec.* 10. 1883.

"Dear Sir,—I am very pleased to answer your note concerning the patient you saw here last May. He remained in much the same condition as he then was until August, having continuously high and hectic temperatures, and a more or less constant succession of spots on various parts of the body—arms, legs, trunk, and face—perhaps the extremities showed more tendency to be affected than other regions. During this time he became much emaciated, though retaining a good appetite and a fair amount of muscular strength. About August he improved very gradually, though still subject to a recurrence of the 'lumps' and some rise of temperature. He got up, and in spite of these occasional slight relapses put on flesh and strength until the end of October, when he left to go to his own country. I am sorry I cannot add that he owed his recovery to any drug. We tried arsenic, mercury, sodæ salicylate, and quinine and iron, at different periods without any apparent benefit. When the arsenic was commenced it seemed to have an immediate good result, but as subsequently a relapse occurred, in spite of its continued administration in larger doses (up to nine minums t.d.s.), the first good result must have been merely of the nature of a coincidence. To show how complete his recovery of strength was, I should say that he acted as porter in the wards by carrying pails, etc., for some weeks before leaving the hospital. Yet only a few days before he left he showed me one or two small nodules on his forearm.

"Believe me, yours very truly,

"Edw. Penny."

It will be seen from the last expressions in Dr. Penny's letter, that although the general health was quite restored,

there was still some tendency to relapse on the part of the erythema. I regret not to be able to give more exact detail as to the constitutional symptoms, and especially as to the temperatures. It may, however, be taken as certain that the latter had been high during long periods. I saw the patient on two occasions only, and have to express my obligations to Dr. Penny (now of Marlborough) for his kindness in supplying me information.

Although I have, according to usage, placed this case in the department of Diseases of the Skin, yet it will be obvious that it is rather one of severe general illness attended by skin phenomena. In the remarks which introduced it, I have said that at the time that it occurred it was unique in the experience of other observers as well as myself. Few indeed, however, are the cases likely to remain long in such a category if due diligence in observation be combined with sufficient width of field. Within the last six months, through the kindness of Dr. Crabb, of Holloway Road, another patient has been brought under my notice whose case in many features closely resembles those of the one just described. In Dr. Crabb's case the temperature chart, diligently kept by him, shows that for nearly six months the temperatures ranged from 103 to 105. The case was seen by several physicians, and the diagnosis of typhoid fever more than once given, yet with these temperatures and great emaciation there went an erythema nodosum eruption much like that just described. As in Dr. Carrington's case, the patient was a young man. I shall publish the case in detail in an early number of the ARCHIVES. In several of its features it goes beyond what occurred in the one now under consideration. Its course is not yet complete.

I shall be under obligation to any of my readers who may be able either to direct my attention to published records of similar cases, or, secondly, to furnish further particulars respecting Dr. Carrington's patient. He was not quite well when he left the *Dreadnought*; as he had had a previous attack he has very likely since come under care for a relapse, and may not improbably have been treated in some hospital. His case would be sure to attract attention.

No. XVI.—*On the "Marbled Skin" and its causes.*

There is a condition of skin to which the term "marbled" is applicable; or perhaps I ought to say that there are several. The commonest and most typical presents a certain resemblance to shell-marble, rather than to those forms which exhibit only veins or streaks. It is seen chiefly on the shoulders, upper parts of arms, and back, but now and then on the limbs also. Its essential features are, ill-marked discs, or small nummular areas, of a dull white colour, upon a more or less dark ground. The crowding together of these discs gives a streakiness to the darker parts, which certainly suggests a comparison with some kinds of marble. Undoubtedly by far the commonest cause of a marbled condition of the skin of the shoulders is the previous occurrence of severe acne in a patient of dark complexion. It is a peculiarity of acne on all parts, but especially on the shoulders, that it leaves, when it is perfectly cured, little white scars. In some patients the condition thus left is very conspicuous and remarkable. More than once I have known a condition which I felt sure was nothing more than the consequence of acne, receive the name of "Vitiligo." It is often very difficult to be certain that the little white spots are really scars, and many a time in studying such cases I have failed to convince others that such was their real nature. If this marbling happens to a patient in whom moveable pigment is abundant, the intervening areas are sure to attract most attention, and as is so frequently the case in leucoderma, it may be insisted that the morbid process is essentially one of pigmentation.

The proposition which I wish now to advance is this, that apart from acne there are many skin diseases which leave little scars and may end in marbling. These scars are often produced without any loss of tissue on the surface. They are, so to speak, sub-epidermic scars. It is the rete chiefly which has been destroyed, and not the epidermis. There is a variety of psoriasis which leaves scars of this kind, and the disease which I described many years ago as Summer Prurigo invariably does so. The patient (a lad named Pennman), whose portrait, as illustrating this form of prurigo, was published by the New Sydenham Society, had, when after fifteen years'

duration his disease got well, his skin left marbled all over by white sub-epidermic scars. In the case of a young lady whom I saw several years ago in consultation with several distinguished medical friends, I believe I quite failed to remove the belief that Addison's disease was threatened. In her the suspicious condition was, a marbled state of the skin of the thighs and back, and, for my own part, I felt certain that the white discs, and not the deep-brown bands between them, were the results of disease. In her the history of the preceding dermatitis was not very clear, for there had been only some lichenoid eruption, consequent on the use of some application for pain. I have been induced to make these remarks by having recently observed this marbled condition in a very marked form in a man who was unquestionably the subject of psoriasis. He had been liable to psoriasis for more than twenty years, his age being now thirty-one. He had never had syphilis, and none of his brothers or sisters had shown any tendency towards disorders of the skin. His eruption began, he says, in little spots all over him, but mostly on the head. He had never had any large patches, the disease being strictly guttate. It had the further peculiarity that it never affected either the elbows or the knees, the positions known to be those most favourable to psoriasis in its ordinary forms. Mr. E—— had often known his eruption get quite well spontaneously, and he had often been temporarily cured by taking arsenic. His relapses have, he thinks, usually occurred in the spring or autumn. He had throughout preserved excellent health. That the disease is psoriasis essentially, is proved by its long persistence, its scaly patches, and its obedience to arsenical treatment. Mr. E—— is now marbled all over on the skin of the abdomen, chest and thighs. I accidentally made the condition much more conspicuous by ordering a chrysophanic acid ointment, which, by making the skin generally of a darker colour, heightened its contrast with the little white scars.

A late eminent judge had been the subject all his life of this scar-leaving form of psoriasis. He had been treated for it in youth by Sir Benjamin Brodie by arsenic, and was an instance of the occasional influence of that drug in producing epilepsy.

His psoriasis was guttate, and although often nearly well, had persisted, when I saw him, for nearly forty years. He also presented the condition of "marbled skin."

No. XVII.—*A peculiar disease of the skin of the hands in a mulatto, simulating Leucoderma.*

Dr. Wade in September, 1885, sent to me a gentleman of negro blood, whose hands presented a most curious condition. Although very dark, Mr. W—— was not a pure negro. He believed that his mother was so, but his father had a white strain. He was about 45, a barrister of great intelligence. His hands presented white patches, which at first sight I took for leucoderma, but which on more careful examination presented remarkable differences from that malady. In the first place the skin was slightly roughened and a little scaly, and there were distinctly marked patches with abrupt margins, which were slightly scaly, but had not lost colour. Indeed it appeared that a sort of pityriasis condition in nummular patches preceded the loss of pigment. The blanched areas were largest in his palms, and in the middle of them were some round, but not abruptly margined, patches of black pigment. The whole of his left hand, both back and front, was involved in various conditions of epidermic disturbance, with loss of pigmentation in different degrees in different parts. The disease ended about a hand's breadth above his wrist by an abruptly marked edge, presenting convexities which were still advancing. In the right hand the extent of skin involved was much less, and was almost restricted to the palm. Mr. W—— told me that the condition had begun in the left hand, and been confined to it for several years. When five years ago he first consulted Sir Erasmus Wilson, all that he had were a few palish patches slightly scaly in the middle of the left palm. He had no white patches on other parts of his body or limbs, with the doubtful exception of the soles of his feet. His hands had never been in any degree eczematous, and the condition gave him no trouble excepting from its conspicuousness. This was a great annoyance to him in his profession and he was obliged always to wear black gloves.

No. XVIII.—*A case of Leucoderma.*

A young gentleman who was sent to me by Dr. Davies, of Liverpool, afforded an interesting example of leucoderma. He was of dark complexion, and some of the patches were thus made very conspicuous. Some of them, however, were very faintly marked, and required careful looking for. For the most part they were arranged in symmetry, but with one remarkable exception. The most conspicuous and largest patches were over his hips, and these were placed symmetrically, although the patch on the left side was three times as large as that on the right. The contrast between the deeply brown skin of his abdomen and hips was such that it was impossible at first sight not to believe that the pigmentation was in excess, and the same might be said of some patches on his neck. When, however, the white patches were covered so that there could be no effect of contrast, then it was seen that the browning did not exceed physiological possibility, and that it shaded quite evenly into the rest of the adjacent skin. The chief deviation from symmetry occurred on his abdomen. On the right side of the umbilicus there was a round patch as big as a crown piece, perfectly white, which had no representative whatever on the other side. All the patches displayed as usual crescentic or spreading edges. On his face and hands there were some ill-marked patches which I should not have noticed, but which had caused him much annoyance. These were quite symmetrical, and occurred in the clefts of the fingers and near the outer canthi of the eye; they could be seen only in certain lights. He was a healthy man, but remarkable for the extreme hairiness of his body. The hairs grew exactly in the middle line of his chest and abdomen, and in great abundance over his hips, being especially thick in the coccygeal cleft. He was the subject of recurring hæmatinuria, blood appearing in the urine whenever he took a journey.

THERAPEUTICS.

No. VIII.—*Notes on the Cure of Ringworm.*

No doubt there are many good plans of treatment for ringworm, and some remedies which are in an especial manner adapted for particular stages and conditions of the disease. My experience has been restricted almost entirely to chronic cases, and to such as have resisted treatment. I have seen few cases or none in the earliest stage. The treatment which I learned as a student (from the late Mr. Startin), and which was very successful, was the blistering of the patches every ten days or fortnight with a vesicating fluid. It has the disadvantages, however, of being painful, and of bringing the unwilling little patient frequently under the surgeon's hands. In private consultation practice it is almost impracticable, and I have gradually, after trials of many other remedies, settled down in tolerable content upon a plan which relies chiefly upon chrysophanic acid. My prescription, with the very rarest exceptions, is as follows:—The liquor carbonis detergens (Wright's) is used as a wash in the proportion of a teaspoonful to a pint of hot water. With this the scalp is to be well washed twice a week, and all scales and crusts removed. The hair is to be shaven or cut close. The curative ointment, which is to be rubbed in more or less freely, according to its effect, and night or morning, or every night only, by the same rule, is composed as follows—

℞ Acid. Chrysophanic 3j.
Hydr. Amm.-Chl. gr. xx.
Lanoline 3j.
Adip. Benzoat. 3 vi.
Liq. Carbonis Deterg. m x.

Misce fiat Ung.

It will be observed that this differs only from the psoriasis ointment prescribed in the last number of the ARCHIVES in the larger quantity of chrysophanic acid. It is strong enough if freely used, to make most scalps redden and swell, and it may occasionally cause œdema of the eyelids and face. The latter effects occur only when it is too freely used. The child should wear a linen cap, and there is then but little inconvenience from staining. The secret of success consists in the patient continuance of the same remedy. I usually promise with great confidence a cure to the persevering, but never a rapid one. It is only the impatient who are disappointed. Those who at the suggestion of their friends, medical or otherwise, change every few weeks from one remedy to another, find ringworm almost incurable, but it is not so with those who go on with the plan indicated; such at least is my impression. I hear now and then from my medical friends that "there is nothing which will cure ringworm," and that patients in whose cases I have been consulted have not got well; but against these I place an overwhelming number who are most thankful for the result obtained. I have good reason for continued confidence in the plan. In the rapid cure of chronic ringworm I have no faith. In all these the fungus has got into the hair-bulbs and walls of the follicles, and it can be killed only by perseverance. I have never seen a case in which chrysophanic acid, carefully and well used, did not keep the disease in check whilst it was employed. The error usually consists in leaving off too soon. When the case appears to be cured, and the hair is allowed to grow, a weaker ointment should still be used twice a week over the whole scalp to prevent relapse. For this purpose ten grains of the acid, the other ingredients remaining the same, will suffice. It should be continued regularly for six months without interruption. Epilation, as so patiently practised in the Hôpital St. Louis, in Paris, is a very valuable aid in the treatment of ringworm. It is so troublesome, however, that I have found it in consultation practice hardly available, and am usually content to have the scalp shaved once in ten days. It is important that the ointment should be rubbed occasionally all over the scalp, as well as into the patches themselves.

A clergyman who obtained my prescription for his children many years ago, and of whom I heard nothing for long afterwards, subsequently came under my care for another ailment. He then reminded me of the ringworm cases and told me that the ointment had not only cured quickly his own children, but all the cases which had occurred in his parish since. The surgeon to a workhouse school, for which I was consulted on account of long-continued prevalence of ringworm, told me that the ointment had proved much more effectual than anything he had tried before, and that he had since had no reason to try anything else.

Kerion presents almost the only phase of ringworm for which I vary my prescription. In it epilation and the use of a strong evaporating lotion (lead and spirit), is the best plan.

When ringworm prevails in a family or school, I believe that it is important to use oils or pomades for those not affected. To keep the hairs greasy seems to be an efficient means of protecting them. The same measure probably is useful in preventing the spread to other parts of the scalp in cases in which a few patches only are present. It is quite possible that the increased prevalence of ringworm of late years may in part depend upon the change in fashion which has driven out the domestic hair-pomades which were formerly so much in vogue.

No. IX.—*Optic Neuritis in Chlorosis—Dr. Gowers' Letter—Remarks on the Treatment of Chlorotic Anæmia.*

Dr. Gowers has written in *The Lancet* for November 23rd an interesting letter on the form of optic neuritis which occurs in connection with anæmia and chlorosis. He insists that it is curable by iron, and that it usually ends in blindness if iron be not given. Upon this he builds an argument in favour of more wide instruction in the use of the ophthalmoscope, in order that these hazardous cases may be early diagnosed and promptly treated. I quite agree with Dr. Gowers that it is very desirable that all students should be

taught the use of the ophthalmoscope, but having said this, I may admit at once that I much doubt whether it is possible for those engaged in miscellaneous practice to keep up such a knowledge of the instrument and its revelations as to be able to put it to practical use. Excepting to those who have daily opportunities of using it, there is possibly more risk of error than prospect of useful discovery. Such being my misgivings, it is a pleasure to know that a knowledge of the ophthalmoscope is not at all necessary in order to a correct treatment of what we may call chlorotic amaurosis. All that is wanted is a canon in practice that when a chlorotic girl loses her sight her chlorosis should be treated. This rule is also (like many other good rules) that upon which most persons of common sense already act.

There is yet another interesting aspect of this matter. The form of amaurosis with neuritis to which we refer does not come on in early stages, but usually when the anæmia is well advanced. The treatment of anæmia by iron is so almost universal that we may safely assume that nearly all such patients have already had that drug. We do not wait for amaurosis before prescribing iron for chlorosis. We may take it for granted, then, that in most instances the amaurosis has developed in spite of the use of steel. This thought leads to the question whether the indiscriminate use of steel is really the best treatment for chlorosis, and whether there be not some cases in which it does not succeed. Many of us have long recognized the paramount importance of purgation in these cases. Sir Andrew Clark, amongst modern physicians, has especially insisted upon this, and has avowed his faith to be chiefly in what our forefathers would have called "an efficient clearing out of the *primæ viæ*." He has gone further than merely giving us this clinical rule, and has formulated the hypothesis, as to the cause of chlorosis, that it really depends upon blood-poisoning by the products of retained and decomposing fæces.

The practical rule that purgatives should be given with or before tonics is of course very old, and has been well insisted on by Abernethy and a hundred others. It has, however, I think, been somewhat forgotten in the present generation,

and in some quarters the use of purgation has been not only neglected but to some extent decried. Sir Andrew Clark has therefore, I cannot but think, done a most useful work in recalling the attention of the profession to this matter. Intelligent patients sometimes arrive at very just conclusions as to their own ailments, and express themselves tersely. One such once said to me when I was about to prescribe for him, "For me purgatives are tonics."

No. X.—*On Over-doses of Nux Vomica given by Accident.*

Interesting and not unimportant experiments as regards doses are sometimes tried for us by the mistakes of chemists or of patients. I have for many years been in the habit of prescribing the tincture of nux vomica very freely indeed. It seems to me the best of all tonics. It very rarely disagrees, and I have never known it to produce poisonous effects. I generally give ten minims three times a day to an adult, but often double that dose. On one occasion in which I had ordered five minims for a child of ten, a representative of one of our best West-End chemists, to whom the prescription had been taken, was good enough to bring it back and ask whether I really intended it. He seemed much alarmed, and assured me that once in his own shop a gentleman who took from the counter a dose of ten drops had had immediately most alarming symptoms. I assured him that I was quite incredulous, and that I had not the slightest anxiety as to the prescription which I had written. I have myself, for experiment, taken a single dose of thirty drops, and realized no symptoms of strychnia poisoning whatever. I believe the tincture of nux vomica to be a safer and more convenient form than any of the solutions of strychnia, and it has the advantage of not exciting alarm in the patient. It may be taken for months together and does not diminish in efficiency. I have had many cases of patients taking much more than was intended, and never as yet with any serious ill results. They have convinced me that the doses which I have named are well within the mark.

The following is one of the most instructive :—

A gentleman, aged 33, had ten minim doses of tincture of nux vomica ordered, in a mixture of which he was to take two teaspoonfuls three times a day in water. The chemist ordered tablespoonfuls, thus increasing the dose to forty minims. Five doses were taken, and the patient, then remembering that I had told him teaspoonfuls, took the prescription back to the druggist and the error was detected. The only ill result which had been experienced was that the head had been made to feel dull and the eyes heavy, "as if I had been drunk overnight." There had been no muscular twitching.

Whilst this sheet has been passing through the press, another precisely similar accident has come under my notice. The patient again took forty minim doses of the tincture of nux vomica. He continued it three times a day for four doses in succession. It was his own mistake, for the chemist had written out the instructions clearly. The symptoms were exactly as in the other case, a dull feeling in the head, but no twitchings. He felt "wonderfully better for it."

A CATECHISM OF SURGERY; WITH CASES FOR DIAGNOSIS.

(*Continued from page* 192.)

No. XXIII.—*A Pustular Hair-destroying Eruption on the Face.*

A man, aged 29, has suffered for many years from an eruption on his face, which has almost wholly destroyed his whiskers. The skin is left in a state of partial cicatrix, red, shiny, and a little tight. He has lost all his lower lid eyelashes, and is liable to recurring attacks of pustular ophthalmia. He is in good health, and there is no family history of scrofula.

Name the disease on his cheeks.

State its nature.

Has it any connection with the ophthalmia tarsi?

Is it cryptogamic?

How should it be treated?

ANSWER.

The case is one of the commonest form of sycosis. Its essence is suppurative inflammation in and around the hair follicles. It is not cryptogamic. It spreads by local contagion. It is, making allowance for difference of parts, precisely the same disease as that known as tinea tarsi, and it leads to the same results, *i.e.*, entire destruction of the hair-roots, and conversion of the surrounding skin into a state of scar.

From its tendency to spread by contagion, to disorganize the structures and to produce scar, it may be considered to be a near relative of lupus. It differs however from lupus in that it never travels away from the hairy parts of the skin.

The essential points in treatment are systematic and repeated epilation and the use of a mercurial ointment. In early stages the disease is easily arrested, but not in the later ones. It is not uncommon for children, who have had ophthalmia tarsi, to become the subjects in adult life of sycosis of the whiskers, &c. In exceptional cases the scalp and even the nails may be attacked. Now and then the pubes axillæ and whole surface suffer (sycosis universalis).

No. XXIV.—*Recovery of two Sisters from Blindness. Question of Diagnosis.*

A lady of 28 writes to me as follows :—

"Dear Sir,—About fourteen or fifteen years ago I became almost blind, and was under your treatment for about two years, when you made a wonderful cure of me, quite restoring my sight. I daresay you will remember me. My sister, who was also blind as a child (and also under your treatment), and myself are now left entirely alone, and we have supported ourselves ever since as dressmakers. With the exception of my being very short-sighted and obliged to wear spectacles, I have not had anything the matter with my eyes since, until the last three weeks."

What was probably the nature of the disease referred to in the above terms?

State the grounds on which you base your conjectural diagnosis.

ANSWER.

The disease was in all probability interstitial keratitis from inherited syphilis. There is no other known affection of the eye which would be likely to cause any long-persisting condition meriting the term "blindness" and yet capable of recovery.

Above all there is no known disease of the eye, which would be likely to cause blindness in two sisters, *both* of whom should recover.

[The case referred to was an instance of very severe keratitis, and the recovery, although slow, was, as described,

very complete. It is of interest to note that the two sisters, whose ages differed by two years, suffered with almost equal severity; and further, that neither of them presented anything characteristic in physiognomy. The elder one had had her teeth, which were notched, replaced by artificial ones. The teeth of the younger one were not malformed.

As a very exceptional fact indeed, I may add that the elder sister, at the time she wrote the letter, had a small salmon-tinted patch of recent formation on one cornea, and was evidently threatened with a second attack. From this she subsequently soon recovered.]

No. XXV.—*On Anthrax (Woolsorters' Disease).*

To what diseases are the terms "anthrax," "charbon," "woolsorters' disease," "splenic fever," and "malignant pustule" applicable?

What is the treatment for the disease in the human subject?

On what does it depend?

ANSWERS.

They are all names for the same disease. Anthrax and splenic fever are used almost solely in reference to animals.

In the human subject the disease begins from local contagion, and by the formation of a pustule. If this pustule be freely cut out the patient is saved. Hence the great importance of prompt diagnosis, since the disease is fatal if it is allowed to infect the blood.

The bacillus anthracis is found in the blood. It is seen as short rods, a little longer than the width of a red corpuscle. As the disease advances the rods assume the form of long filaments. They multiply with enormous rapidity.

It chiefly affects oxen, but almost all animals are liable to suffer, pigs perhaps excepted. It appears to be connected in animals with malaria, but is very contagious. In man it results only from contagion from animals.

No. XXVI.—*Cowper's description of Mrs. Unwin's Case.*

Cowper, in one of his letters, writes in *January*, 1779:—"I have more items than one by which to remember the late frost; it has cost me the bitterest uneasiness. Mrs. Unwin got a fall on the gravel-walk, covered with ice, which has confined her to an upper chamber ever since. She neither broke nor dislocated any bones; but received such a contusion below the hip as crippled her completely. She now begins to recover, after having been helpless as a child for a whole fortnight; but so slowly at present, that her amendment is even now almost imperceptible."

On March 12th, he adds:—"Mrs. Unwin, though two months ago she fell, is still lame. The severity of the season, which has not suffered her to exercise herself in the open air, has no doubt retarded her recovery; but she recovers, though even more slowly than she walks."

What was probably the nature of Mrs. Unwin's injury? (She was elderly.) What should have been its treatment?

ANSWER.

The most probable diagnosis is that of an impacted fracture of the neck of the femur. This would explain the incapacitation during the first few weeks, and the long-continued lameness. Many such cases recover without any diagnosis having been formed and without any use of splints. Confinement to bed is the measure needed, and this the patient's incapacity to get up secures. There are two dangers in such cases. First, that the surgeon, over zealous for exact diagnosis, may displace the impacted fragments in his endeavour to ascertain whether or not the bone is broken. Second, that the patient may be unwisely encouraged to try to move, or even to use, the limb. If the patient's instincts are allowed their play and absolute rest in bed permitted for a month, with extreme caution in all necessary movements, there is then but little risk of displacement occurring. There is no objection to the use of a straight splint, but it should be employed for fixation purposes only, and not for extension. The case should be designated to the patient as one of fracture, and all further attempts at diagnosis or reduction by extension avoided.

No. XXVII.—*A Recurring Eruption. Is it Urticaria?*

A florid young lady of 29 has been for three years liable to what she calls "nettle-rash." The eruption is never produced by articles of diet, but always follows active exercise. A game at tennis, or a quarter of an hour on a bicycle, invariably covers her with wheals. They begin as little itching red spots and rapidly spread. On the face it is attended by great swelling and disfigurement. The attacks seldom last longer than an hour, and the skin then resumes its natural condition. A warm bath invariably brings out the eruption, and it has sometimes occurred in consequence of sudden excitement, without any over-heating. Her theory is that it takes the place of perspiration, for she says that her skin never perspires excepting in the arm-pits.

Is the case really one of urticaria?

Is it common for urticaria to follow exercise, or exposure to heat?

What remedies are indicated?

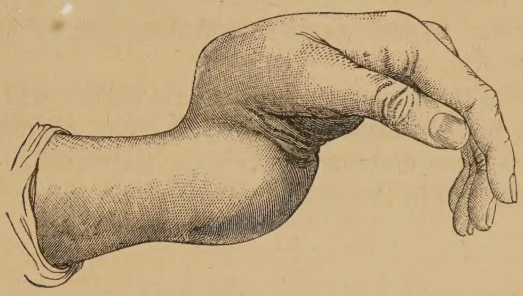
ANSWER.

No doubt the disease is common urticaria of the fugaceous, or transitory variety. It is not at all uncommon, especially in young women, for urticaria to be produced by over-heating. It is quite possible that the patient's suggestion is correct, and that defective, or delayed, relief by perspiration, is a link in the chain of nervous phenomena which constitute urticaria.

The occurrence of urticaria implies excessive mobility on the part of the vaso-motor system, and the remedies should be directed to the restoration of its tone. The late Mr. Startin, who had had great experience, used to say that he had never known urticaria resist the patient use of quinine in combination with an alkali. The patient should wear silk next the skin, so that there may be no local irritation when heated by exercise. Careful endeavours should be made to let the pathological habit which the skin has taken-on lose its force. Thus for some time to come the patient should never get into a hot bath, and never do anything likely to heat the surface.

(Quinine, arsenic, and nux vomica were prescribed in combination.)

No. XXVIII.—



The above woodcut has been executed from a drawing which was made from the hand of a lad of fourteen, just after a fall. Although it may be suspected of exaggeration, it really does not in any great degree misrepresent the amount of displacement which existed.

. What was probably the nature of the injury?

2. How would you distinguish between a detachment of the carpal epiphysis and a true dislocation of the wrist?

3. Which of these accidents is the more common?

4. How would you have attempted reduction in such a case; and would it probably have been easy?

5. What ill result may follow separation of the epiphysis?

ANSWERS.

1. The deformity must be caused either by a complete dorsal dislocation at the wrist, or by a detachment of the carpal epiphysis with complete dorsal displacement.

2. The diagnosis would have been easy of establishment by feeling for the styloid process of the radius. If a detachment of epiphysis, this must go with the carpus; if a dislocation, it would remain, of course, with the radius.

3. Separations of the epiphysis are tolerably common, whilst dislocations at the wrist are of the most extreme rarity.

4. Reduction would have to be attempted by extension and

manipulation with the hand bent backwards. It would probably, with such displacement, be extremely difficult.

4. Defective growth of the radius is apt to follow after injury to the epiphysis, and its effects in shortening the bone will be in proportion to the youth of the patient at the time of the injury. In some cases suppuration may occur.

NOTE.—In the case from which this sketch was taken it was found impracticable to effect reduction, although anæsthetics were given, and much force used. Suppuration followed, and the arm was in the end much crippled.